

# **HISTORICAL DOCUMENTS OF EASTERN INDIA**

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**ROBERT MONTGOMERY MARTIN**

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**HISTORICAL DOCUMENTS  
OF  
EASTERN INDIA**



**PURCHASED**  
**HISTORICAL DOCUMENTS**  
**OF**  
**EASTERN INDIA**  
(in Eight Volumes)

*by*  
**ROBERT MONTGOMERY MARTIN**

**Volume-III**  
**BHAGALPUR**

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## DEDICATION

*To the Chairman, Deputy Chairman and  
Court of Directors  
of the  
Honourable East India Company*

HONOURABLE SIRS,

In soliciting your permission to place before the British Public the official survey of one of the richest territories in Asia, I have been acting in conformity with the whole tenor of my life for the last ten years in India and in England, of which the leading principle has been the consolidation and prosperity of the distant dependencies of the Empire. The survey described in the following pages had its origin in the laudable anxiety of your Honourable Court to enquire into the condition of the people, and the resources of the country, over whose affairs you were required to preside; and as the first step towards the attainment of good is the investigation of truth, it was in accordance with your wonted principles that this important enquiry was undertaken. From the mass of materials which you have had the goodness to permit me access to, I have culled, digested and arranged this work in the ardent hope that it may tend to awaken every serious thinking mind in these realms to the great responsibility which is involved in the possession of British India.

The history of that magnificent portion of Asia is without a parallel in the annals of the world, and scarcely less extra-ordinary is the rise and progress of that respected authority whom I have now the honour to address. Under the munificent auspices of one of England's wisest sovereigns you commenced a mercantile career—which her noble patriotism fostered with all the prophetic feelings which characterized our Virgin Queen. Amidst the difficulties of jealous rivalry—subject to the weakness or arbitrariness of successive rulers—and controlled by various circumstances,

your career was steadily onward, until from humble merchants struggling for existence you became the governors of one of the fairest portions of the earth. By what means and under what influencing motives you thus rose to supreme power over a country nearly as large as Europe, and peopled by an *hundred million* of human beings, I have elsewhere demonstrated; and time, the rectifier of error, will remove the calumnies which have been promulgated against the East India Company, and do justice to your principles and actions.

Peace, the precursor of so many blessings, was, through your instrumentality (so far as the records of ages extend) first established in Hindostan, and the bondage of the body, and the tyranny exercised over the mind, under which myriads had sunk, were exposed, with all their desolating consequences, to the chastening influence of a christian government.

But great as have been your past merits, they fall far short of the glorious honours which await on your future proceedings. It is easier to subdue than to govern; to administer is less difficult than to legislate; and to consolidate dominion requires more mental and moral power than its acquirement.

By the appointment of Divine Providence, a small island in the Atlantic has become mistress of vast and fertile territories in Asia, and you have been made not only the instruments for their acquisition, but divested of the mercantile character to which you owe your origin and progress, the executive power for their protection and well being has been confided to your Honourable Court. Alas ! it is but too apparent that national or individual public responsibility is not sufficiently attended to in this professedly Christian country, and although this reproach attaches less to your Honourable Court than to other constituted authorities, yet am I unwilling to permit the present opportunity to pass without remark. The omniscient disposer of affairs would never have permitted our occupation of India for the mere sake of individual profit, or national advantage : it is a sacred trust reposed in England for the welfare of millions, and according to the exercise of that trust, will be the apportionment of future justice. Yet with what culpable apathy and criminal indifference has England heretofore regarded India ! By some it has been viewed merely as a medium for mercantile exchanges, by others as a valuable source

of patronage; not a few consider it as a grand field for the exercise of war or politics; and many deem it only a useful territorial appanage to enable England to maintain the balance of power in Europe.

Unquestionably beneficial as all these advantages may be to England, they have however but a secondary reference to India—and none at all in regard to the future state of millions of men;—whereas, if a moral responsibility for the trust reposed in Britain were felt and acted on, the most valuable and permanent results would ensue, and produce equal good to both countries now and for ever. Heretofore it must be admitted the great duties of your Honourable Court have been directed to the establishment of peace and the maintenance of our authority over the acquired provinces, but the following pages demonstrate what a new and truly noble field presents itself for the exercise of the power with which you are invested. The details which this survey exhibit would be painful to contemplate were there no prospective remedy. In the official returns thus made to your Government you behold a vivid picture of the physical, mental, and moral condition of the inhabitants of the fertile territories subject to your sways, you can trace in the small amount of the wages of industry,—in the scantiness of their food and clothing,—in the wretchedness of their tenements,—in the general poverty of their labour,—in the revolting superstition which pervades their minds,—and in the immorality which debases their nature—you can in all these combined trace the grievous effect of ages of anarchy and bloodshed, and misrule,—and in viewing their direful consequences, your feelings must be harrowed by the pitiable spectacle thus exhibited, while your utmost energies will, I doubt not, be directed to the alleviation and cure of such portentous evils.

The miseries attendant on misgovernment, whether individual or social, are wide spread, of long extended duration, and consequent difficult removal. This truism is fully exemplified in India, and the duties required of England, and of your Honourable Court as her executive power are therefore most momentous. Judging from the past, we may with confiding hope, I trust look forward to the future. Your freedom from commercial pursuits, the judicious selection of men for your Honourable Court, who

are identified with the prosperity of India, and the high moral rectitude which characterizes the East India Company promises most auspiciously for the welfare of the Empire.

It is the duty of every friend to social order—of every patriot who wishes to see his country's fame and prosperity based on the rock of justice—of every Christian who desires the extension of the only true civilizing principles of the Gospel, to give to your Honourable Court a cheering support in the responsible station which you fill. On that station the eyes of every friend to mankind are fixed: for, on the fulfilment of its duties will depend the happiness of millions of our fellow creatures.

That the Almighty Disposer of events may in his mercy and goodness influence your thoughts, guide your judgments, and attend your actions, is the sincere desire of—

Your obliged and faithful servant,

*London, February, 1838*

ROBERT MONTGOMERY MARTIN



## INTRODUCTION

The present volumes of the official survey of 'Historical Documents of Eastern India' includes the Zilahs or districts of Behar and Patna, Shahabad, Bhagalpur, Gorakhpur, Dinajpur, Puraniya, Ronggopur and Assam. The particulars given of the social state of the numerous inhabitants of these fertile and important Provinces are equally, if not more valuable and interesting with those detailed in the preceding volumes. There may be some individuals who cannot appreciate the merit of the minutiae which this survey presents, but the philosophic mind will arrive at juster conclusions respecting the character and condition of the people by means of this very minute specification, than by any other mode of ratiocination. The merchant and the capitalist will be also the better enabled to judge of the capability of the country for the speculations of commerce, and the employment of capital and dependent as the proprietors of the East India Company now are for their dividends on the territorial revenue of India, the circumstantial account of the rent, tenure and produce of land—and the management of public and private estates, will prove of inestimable value. Since the appearance of the preceding volume, many old Anglo-Indians have declared that this survey has presented them with a clearer view of the actual frame-work and anatomy of society in the East, than any thing they saw or heard during their sojourn in Hindostan. The famine now devastating the Upper Provinces of the Bengal Presidency, gives an additional, painful interest to the details which this survey presents of the physical condition of the people.



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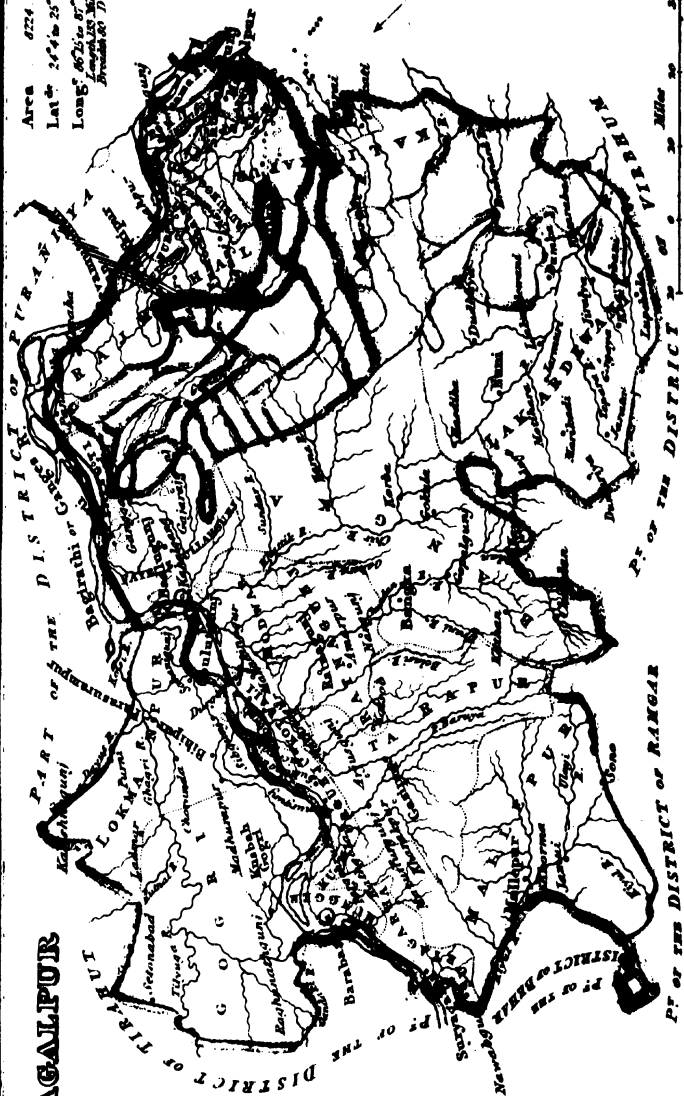
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# BHAGALPUR

Area 4724 Sq. Miles  
 Lat. 25° 40' N. 25° 40' North  
 Long. 86° 20' E. 86° 20' East  
 (From 1881 Map)



PT. OF THE DISTRICT OF BHAGALPUR  
 PT. OF THE DISTRICT OF RANGAON  
 PT. OF THE DISTRICT OF PATNA  
 PT. OF THE DISTRICT OF MUZAFFARPUR  
 PT. OF THE DISTRICT OF TIRHUT

## CHAPTER I.

### AREA, TOPOGRAPHY, RIVERS, LAKES AND MARSHES, METEOROLOGY, &c.

This district occupies the S. E. corner of the Mogul province of Behar, together with a small portion of Bengal; but would appear at one time to have been entirely included within the Muhammedan kingdom of the latter name. Its greatest length, from the boundary of Virbhum on the Dwarka to that of Tirahut on the Tilawe, is about 133 miles in a N.N.W. and S.S.E. direction; and its greatest breadth, crossing the above line at right angles, from Rajmahal to the boundary of Virbhum near Chandan, is about 80 miles. According to Major Rennell its southern extremity, at Chandrapur on the Dwarka river, is in  $24^{\circ} 4' N.$ ; and its northern extremity, on the Tilawe, extends to  $25^{\circ} 49' N.$  Its eastern extremity on the Ganges near Gaur is  $15' W.$  from the meridian of Calcutta; and on the hills of Gidhaur it extends about  $2^{\circ} W.$

By tracing the boundaries, so far as they could be ascertained on the map of Major Rennell, it contains about 8224 square British miles; but the extent cannot in this manner be ascertained with much precision; for in the whole district there are very few boundaries that are tolerably well defined. Every proprietor of land alleges, that his boundary extends farther than his neighbour in that direction will allow; and

as the whole boundaries of the jurisdiction have been fixed by the extent of certain properties, and not by any great lines marked by nature, the whole outline of the district is uncertain, except where decisions of the courts of law have determined the disputed parts.

SOIL is varied ; but the parts fit for the plough seem uncommonly rich, and want only pains to become highly productive. A very considerable extent is occupied by mere rock, totally incapable of cultivation ; and this is the case not only on the hills, but in a few places on the plains. A much greater extent is covered with fragments of rock of various sizes. On the hills these fragments are so large and numerous, that, could the plough be used on account of the declivity, the nature of the soil would render its use impracticable : yet in many parts such a soil is very far from being barren, and such alone is the land cultivated by the mountaineers of Rajmahal. In their fields fully a half seems to consist of angular masses of rock, from six inches usually to one foot in diameter, and yet their crops of cotton and arahar (pulse) equal any seen on the plains.

There is also a considerable extent of land, in which, mixed with a good soil, there are many small fragments of stone, of a size that does not impede the plough. In some parts these are considered as rendering the soil useless ; but in others, land containing these small stones, is preferred for crops raised during the rainy season. The stones preserve the soil cool and moist, and encourage vegetation. The extent of poor, sandy or gravelly soil is much smaller than in Puraniya. Near the banks of the Ganges some land is overwhelmed with sand deposited from the inundations, and is called *Balubord*. It is considered as totally useless, at least in the western parts, and there the indigo planters have not discovered the advantage of sowing their plant on such land. Near the Ganges is a very light sandy soil, but still capable of cultivation. Near some smaller rivers, which inundate their banks, is some very poor land called *Usari*, which has a thin soil over a sharp dry sand. This land is too deeply inundated to yield any thing during the rainy season, and, during the dry, is too suddenly scorched to bring a crop to maturity. Even the grass, which shoots as the floods retire, is soon withered, and becomes useless either for thatch or



pasture. The extent of such is small. It is very different from the high sandy lands of Puraniya, which in the rainy season give tolerable pasture, and with manure, would give crops of grain. Near the Ganges a thin, poor land over sand gives light winter crops of pulse and linseed:

The soil in some few parts contains so much coarse sand and gravel, that it is unfit for the plough; but yields trees, and might be employed in plantations for rearing Tasar and Lac. Among the circumstances in some places alleged to render the soil totally useless, are calcareous nodules (ghang-gat) mixed in the earth, and an efflorescence of soda from its surface. In some places these calcareous nodules cover the whole surface, and there not a pile of grass is to be seen; but the whole extent of such is very inconsiderable; and where the nodules are imbedded in a soil of red clay, and placed some way under the surface, they are far from doing harm. I have indeed observed no lands more productive in the district, even in the same vicinity, where it was alleged that they rendered the land totally useless, as at Bhagulpoor. The land impregnated with soda is of a very small extent; and in one place I saw it under crops of a very tolerable quality. Land of a red soil composes a great part of this district. In some parts it is mixed with so much sand as to constitute a free soil; but in general it is a stiff clay, and without artificial watering it cannot be cultivated, except in the rainy season; but it is very productive of such grains as can then be sown; and, when artificially watered, as in the gardens near Munggeer, it becomes by far the most valuable land in the district. The good land of an ash colour in the interior of the country is mostly clay, with more or less intermixture of sand; and towards the boundary of Tirahut, especially, there is much of a very light colour, approaching, when dry, to white, as in Dinajpoor. This is stiff; but in most places the soil of this colour is rather free; although in general it cannot be cultivated for winter crops without a few waterings. In some places of the interior the soil is of rather a peculiar nature, which, from its colour resembling that of an ass, is called *Kharawa*. This contains a very considerable portion of sand; but, when dry, it is very hard; and, when under water, as in worn down paths, the sand and clay separate, the former coming to the surface. On the move-

able banks of the Ganges again, where there is no red soil, there is much of a rich blackish clay; during the inundation it is so soaked, that it does not require to be watered to enable the farmer to cultivate it in winter. There is also a great deal of a rich, free, dark ash coloured soil.

**ELEVATION.**—Bhāgulpoor is a hilly district: the hills in very few parts compose regular chains of considerable length; in most places there are passages at very short intervals, through which a traveller might pass without any considerable ascent; but in the hilly parts these passages have been avoided. In the great cluster near Rajmahal the hills themselves, notwithstanding the ruggedness of their soil, are tolerably well occupied, considering the manner in which they are cultivated, as it requires long fallows. Many however of these hills are waste, and the number of people might be considerably augmented.

The other clusters of hills are entirely waste, nor has the smallest attempt been made to introduce among them the use of the hoe. These hills are undoubtedly more rugged than those towards Rajmahal, and more vast masses of rock occupy their surface; they are of a primary formation, while the hills of Rajmahal are secondary, and some of them perhaps volcanic. The whole of these clusters, and even the hills of Rajmahal compose, in the opinion of the natives, a part of the Vindhyan mountains, which extend from the south banks of the Ganges to near Cape Comorin. In fact the natives consider the vast plain of Hindustan, forming the centre of their world, as bounded by four mountains. That on the south has been already mentioned. On the north is Himalayachal, or the Emodus of our ancients. On the east is Udayachal, the mountains of Ava, unknown, I believe, to the ancients. On the west is Astachal, the Parapamisus of ancient geographers, which separates India from Persia. Besides the more remarkable clusters of hills, there are many smaller ones, and many detached peaks, which often spring suddenly from the most level parts of the country, and sometimes from the bed of the Ganges; but in general there is a considerable extent of swelling ground near the hills, and most of the interior of the country is of this nature, although the swelling ground, and even the hills, in some parts, approach to the very bank of the Ganges.

**RIVERS.**—*The Ganges.*—Above Mungger\* the great sacred river of the Hindus forms the boundary between this district and that of Tirahut for about thirty miles. In the time of Major Rennell, at the western extremity of this line, there was a large island in the river, the southern arm of which received the Kiyul river. This arm having become dry, the island is now conjoined to the southern shore; but a small channel remains, which conveys the water of the Kiyul to Suryagarha, and is called by that name. From Suryagarha, a place of considerable trade, the river runs about 11 miles with a very wide uninterrupted channel to the boundary of division Mungger. At the boundary of the division of Suryagarha the Ganges divides into two arms, which surround a long winding island, extending to Mungger, and giving rise to numerous disputes among the proprietors, and native officers of police of the two districts. In the time of Major Rennell there were in this space several small islands which have now united into the one above mentioned, although this is still intersected by several small channels.

From Mungger, a place of great trade, to Patharghat, the Ganges has this district on both sides for almost 60 miles. Immediately below Mungger the river, since the time of Major Rennell, has encroached much on both banks, especially towards Sitakunda, and has formed in its channel some very large islands, the property of some of which is keenly disputed by sundry persons. In many parts of this course the right bank of the river is rocky, so that it can make no farther encroachments. The channel between Sitakunda and the islands is smaller than that on the west, and in some years has been fordable. Opposite to the lower of these islands a branch of great length separates from the left bank of the Ganges, which it rejoins far below. It passes east for about 13 miles through the division of Gogri, where it is called Baharkhal. It then takes a large sweep north to reach Bhipur, a place of some trade, passing by Madhura-pur, where there is some commerce. At both these places it is called merely a branch of the Ganges, and in fact this part of it, in the time of Major Rennell's survey, was the northern side of a large channel of the Ganges, which then passed Bhipur (Behpour R.) This channel is navigable in the

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\* Now written Monghir.

floods; but in many parts becomes quite dry during the fair season. From Bihipur it passes south about six miles to Sibgunj, a place of considerable trade, where it is called the Kalbaliya, but is navigable in the rainy season alone. It rejoins the river about five miles below.

The southern side of the same channel of the Ganges, in the time of Major Rennell passed Bihipur, but now forms a branch called Ganggacharan, which runs within the former, and on which agriculture is making rapid encroachments. Below the islands and Sitakunda we have, for about 14 miles, a very uninterrupted channel, about a mile wide, but in the dry season one half, or perhaps more, is a white glittering sand. This is chiefly on the northern and convex bank, which is low, while the water keeps near the south bank, which is a high red clay filled with calcareous nodules, strongly resisting the encroachments of the river. At the end of this uninterrupted space, towards the east, is a vast rock of granite surrounded entirely by the stream, with another adjacent to the southern bank. Both have been long dedicated to the various superstitions, which in succession have influenced the people, and the singularity of the situation still excites the devotion of multitudes. At this place is Sultangunj, a place of some trade. Below this, in the time of Major Rennell, a branch of the river took a sweep to the north, forming a large island; but this branch in the dry season is now stagnant, and in most places cultivated; while the small island, laid down by our geographer south from the larger, has now grown much larger, and has on its northern side the chief branch of the river. This island is now a subject of dispute between the people of the divisions of Lokmanpur and Kumurgunj.

Opposite to this, as in the time of Major Rennell, and extending towards Kahalgang, is a channel of the Ganges, which is called Yamuniya or Jāoniya. Very considerable changes have however taken place on these parts since the time of that distinguished geographer. The channel in its upper part has contracted very much, and has been broken off by the branch of the river, which surrounds the disputed island; while its lower has been very considerably enlarged, and is navigable throughout the year. Its channel however is again interrupted by the great river, which has carried away the islands opposite to Barari (Berraddy R.), in lieu of

which a part added to the northern bank is now claimed by the people of the Kotwali division. Still farther the river has worn away a great part of the northern bank, and has greatly enlarged the width of the lower part of the island between the Yamuniya and Ganges. The length of this island, towards the east, has however been very much curtailed, and three immense rocks of granite, north from Kahalgang, which in the time of Major Rennell were included in this island, are now in the middle of the river, forming one of the most picturesque scenes that I have ever seen. From these rocks to Patharghat the river sweeps some rocky hills, and two small remnants of the former island still resist its power. One of them, opposite to Patharghat, is supported by a rock of granite, which, when the river is low, rises a little above the surface. On the enlarged part of the Yamuniya the only place of trade is Bhagulpoor. On the south bank of the Ganges, in the whole of this extent, the only place of trade is Kahalgang; and on the northern bank the only place is Sahali, at the mouth of the branch of the river called Kalbaliya. A few miles below the mart called Sahali the Ganges sends, from its left side, a small channel, which after a course of eight or nine miles rejoins the great stream, just before that unites with the vast body of the Kosi. This channel is called Ganggaprasad, and has on its banks a small mart named Pangchgachhiya. It is only navigable in the rainy season.

From Patharghat downwards the Ganges, so far as concerned with this district, has been described in the account of Puraniya.\* It only remains to give an account of some branches of the river that are included in this district, and of the places of trade on its banks. Between Patharghat and Paingtí is an old channel of the river, in many places both wide and deep, but in the dry season quite stagnant, and in many places cultivated. It extends five or six miles in length, and is called merely Ganggacharan, or a branch of the river. A little below Paingtí, where there is some trade, what has formerly been an island of considerable size, is now in a great measure united to the division of that name, the channel by which it was separated being now very narrow, and for the greater part of the year is quite dry.

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\* See Vol. iii.

Between Teliyagarhi and Sakarigali are large islands in the river, but the principal channel goes by their northern side, and in spring the channel on their south contains little water. Below Sakarigali, where goods are exported and imported, are other more extensive islands, and the branches by which they are surrounded are navigable at all seasons. Above Masaha there is in the undoubted possession of this district an island, which is separated by a channel called Pangchgachhiya, that of late has been fast advancing to obliteration.

Since the time of Major Rennell the bend of the river between Masaha and Rajmahal has been entirely obliterated, the main channel of the river passing straight between the two places. The old course is now marked by a channel, in some places cultivated, and called the Baramasiya. On this part of the river Rajmahal is the only place of trade: Opposite to Udhawanala (Oudanulla R.) the river has made many changes since Major Rennell drew the plan of the lines erected there by Kasem ali.\* It has at one time encroached, and carried away almost the whole fort; but it has since retired to a great distance, and left an extensive cultivated tract divided by two channels, one of which separates into two arms. In the dry season these are not navigable; but in some parts they are wide, and contain large pools of stagnant water.

At Phutkipur the Ganges sends an inconsiderable branch called the Pagla to join the Gumanmardan; and some miles below it sends another, called the Khajuriyamohana. Neither is navigable in the rainy season. At Mohangunj the smaller Bhagirathi sends off another Pagla, encircling Mohangunj, and separating this district from a portion of Dinajpur. A little lower down the Bhagirathi sends towards the west a channel called the Kirtaniya, which afterwards bends south to Thanah Pratapgunj, where it communicates with a branch of the Gumanmardan. It afterwards turns east to rejoin the Bhagirathi, near Thanah Aurungabad; but in this space it sends from its south side two branches, and receives on its north a channel, which separates from the Bhagirathi a little below the Kirtaniya, and, after running some way S. W. by the name of Uparjani, turns S. E., and is called Kalapani. The Kirtaniya in December is in many places dry; but the

Kalapani contains a great deal of stagnant water. Both the branches sent from the Kirtaniya go into the Virbhum district, and join a river called Baranadi, that will be afterwards mentioned. That towards the west is first named Boyaliya and then Kaksa. That towards the east is first named Madhojani, and then Chanduni. The Madhojani is a pretty large creek, but in December is stagnant.

In the account of Puraniya it is mentioned, that in the rainy season 1809, the lower channel of the Bhagirathi, leading to Calcutta, had been entirely shut; but in the following year it opened again, and was nearly of the same size with the upper channel; both however suffered a considerable diminution, owing probably to the new communication opened below the Jalanggi. On the upper channel, within this district, Mohangunj and Kaligunj are inconsiderable marts for exportation. Songti laid down by Major Rennell in this district, has been removed to the opposite side of the river, and placed in a corner of the district of Murshedabad.

*Of the rivers on the north of the Ganges.*—The first river, that occurs in proceeding down the left bank of the Ganges, is that which Major Rennell calls the Bogmutty (*Vagwati*); but which now, at least, the natives call the Gandaki. The Vagwati derives its appellation from one of the names of the spouse of Vishnu, and in the valley of Nepal, where it has its source, is considered as holy; but, on reaching the plains of Hindustan, it loses its importance, and in the Tirahut district joins a small river, which passes Mozuffurpur its capital, and which is called the lesser Gandaki.\* Although the Vagwati is by far the most considerable stream, yet as this Gandaki is probably an old channel of the great river of that name, the united stream is most commonly called Gandaki, and channels alone, that proceed from it in different parts are considered as the Vagwati. Numerous changes in the course of the Vagwati have given rise to violent disputes, that have greatly impeded the improvement of the country.

The Gogaree, in some parts called Ghagri, and in others Tilyuga, enters from Tirahut the division of Gogri, in an exceedingly neglected part of the country, as a very con-

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\* The Gandaki for nine or ten miles forms the boundary between Bhagulpoor and Tirahut or Tirhoot: its right branch is navigable at all seasons.—ED.

siderable stream, navigable at all seasons for small boats or canoes, and in the floods admitting large vessels.

*The rivers south from the Ganges*—have a very different aspect from those hitherto described, and more resemble the rivers of Mysore. Although the channels of some of them are of great width, none of them in this district is at any time navigable, except in the Eastern corner, where in the floods the water of the Ganges, filling the lower parts of their channels, renders them penetrable for small boats. Even the largest of them, having channels from 200 to 400 yards wide, are in general fordable throughout the rainy season, and foot passengers even seldom find them too deep or rapid for more than three or four days at a time, or oftener than three or four times a year; but several of them at that season assist in floating down bamboos and timber, although the natives do not avail themselves of this assistance so much as they might. The practice is indeed almost entirely confined to the rivers that fall into Virbhum.

In the dry season it is chiefly near their sources, that these rivers contain any visible stream, and then each of the numerous small branches appears to contain a greater quantity of water, than the vast channel worn by the united force of these torrents, when swollen by the periodical rains. The widest channels, indeed, appear in spring a perfect dry sand, but by digging a foot or two deep, good water may at all times be procured, and it is evident, that this subterraneous water has in some cases a current, as canals dug obliquely across the channel collect a small stream, which may be conveyed to some extent, and with great advantage for the purpose of irrigating the fields.

The Kiyul comes as a considerable channel from the country called Kharakdiha in the district of Ramgar, and leaving the old castle of Gidhaur at some distance from its western bank, receives, nearly opposite to that fortress, a river called Maura. The Maura rises by two sources from a chain of hills, which runs parallel to the frontier of the division of Mallepur, and at no great distance from it, in the district of Ramgar. The united streams of the Maura and Kiyul have formed a channel, not less than 400 yards broad; but in March, when I saw it there was no stream, and only a very little stagnant water in a few pools, at great distances from each other, and of inconsiderable size. Not only how-



ever its main channel, but several tributary streams afford a great supply of water for irrigation, and their banks are one of the finest parts of the district.

About two miles below the mouth of the Maura the Kiyul receives, from the East, a fine river named the Ulayi, little, if at all inferior to it in size. This also arises in the Ramgar district, where it is said to run through a narrow passage called Kewalghat, (Kewal R.) and then over a rock of white marble, immediately below which it enters this district in the division of Mallepoor. There I found it in a narrow passage called Ghoramara, (or the death of horses), a name not unapt to a passage very formidable to cavalry. In the parching heats of March, the Ulayi at this place contained a very fine stream, the largest I think, that I have seen among the hills of this district; but fordable by a child. About 10 or 12 miles below Ghoramara the Ulayi receives the Nagini, a torrent of short course, which contains a pretty stream, and comes from the hills towards the east.

Below this junction seven or eight miles the Kiyul receives the Angjana, the nymph of which, having being impregnated by Pavan, the god of storms (*Eolus*,) produced Hanuman (*Pan*,) the prince of monkies (*Satyri*,) and companion of Ram (~~*Bacchus*~~). No part in fact, abounds more with the animals called Hanuman. The river has its source in hot springs, about 12 miles in a direct line south-west from Mallepoor, near which the Angjana joins the Kiyul. The Nakti is composed of two rivers, the Kathra and Mata.

In the Bengal atlas south and west from Mungger is placed a large lake, sending two small channels to the Ganges. The lake has totally disappeared, its situation in spring being covered with one continued sheet of wheat and barley; but the two channels remain. They are both of considerable size; but in the dry season contain only a few stagnant pools.

The Chandan, from the town of that name to Jamdaha, passes through a most beautiful country, the banks on both sides being cultivated and finely planted, while the supply of water which it affords, renders them highly productive. At Jamdaha it may be 150 yards wide, and at all seasons contains a stream.

From Jamdaha to Jathaurath, where the Chandan entirely leaves the hilly country, the fertility of its banks is by no means diminished. At Thanah Bangka its channel is between

4 and 500 yards wide; but even in November its stream is small, and in spring its surface becomes entirely dry. A little below Bangka the Chandan admits on its left the Urani, a fine river, which supplies its banks with water, and they are most beautiful, and well occupied. It rises about 15 or 16 miles south-west from its mouth, and soon after receives an addition from Kasmau. A little below this, at Gangti (Gunttee R.), I found it in March a fine sandy channel with a small clear stream. From Jathaurath the Chandan passes south for about six miles, through a fine level country, and then separates into two branches; the most considerable of which is named Andhela.

The Dhobe is a more considerable river, and with its various branches waters the extensive division of Lakardewani; and, during the rainy season, is employed to float down timber and bamboos from the very centre of that territory. It rises near the northern boundary of that division, and for some miles runs west, parallel to the boundary of Bangka.

[Several of the smaller rivers and their branches are given at considerable length in the survey. On the N. of the Ganges—the Gangacharan is a channel between the Ganges and Gandaki; Kamaladahar and Kalyana small branches of the Gandaki. The *Mara* (dead) Gandaki is the left branch of the Gandaki, is nearly dry at some seasons. The Dakuynata a branch of the preceding. Chandaha flows into the Vagwati. The Katnai, Dayus and Loram into the Tilynga. On the S. of the Ganges the Nakti has its origin in two branches, the Keruya (W.) and Bhajaha (E.) The Sabaijor is the S., and the Dhobejor the N. branch of the Kathra. The Mata or N. branch of the Nakti has its origin in two sources called Malmana (S.) and the Bajan (N.); it receives the Jamkhar and Kasai. The Vaghdhar (or tiger-catcher) into the Kigul, as also the Manika and Morabe; and the Kasai and Had, or Bahuyara. The Amara and Mahelasariya form the channel of the Singgiya, or lake S. W. from Mungger. The Garaiya and Bhela form the Mahelasariya. The Dakranata (proceeding from the same lake) called also Karelikol, where it changes its direction from E. and W., to N. and S. receives the Murghat. The Ghorghatnala falls into the Ganges near Thanah Kunurgunj. The Kodalkati which flows into the preceding receives the Ubhinala. The *Man* rises from Belan, receives a great accession from the warm springs of Mahadeva hill; then the cascade of Haha, the Pangchkumar, Patgha, Jalkunda, and then joins the Mohane. The Mohane receives the Khutiya, Auraha, (containing the Bamura, Gaighata, and Lubarni) and Sakriha. The Baruya arising in Gidhaur (Ramghar), receives the Budhiyajor, Mathsumbujor, Karing, Tabkuyanijor, Khatra, Mandaha, and Patun. Nine miles from Tarapur the name of Panis-alajhil, and then receives the Nesarachaongr, (called also the Tirakar, Baramasiya and Lohagar) which is augmented by the Amra, Gahera and Gangti. The Nesara subsequently becomes the Belat—then the Belasi, and next the Chandan, which also receives several small rivers, and is named in different places the Andhela, Kankayithi, Pangjarma, Gordhoyi or Bajani, Mahmudah and Guriyani. The Dakayi (rising in Virbhuma) subsequently the Paraba, Deonar, Kanijuri, Dhobe and Baghora receives many small rivers. The Yamuni called also the Sahariya, and Bangiyhi receives the Khattik, Sundar and Bhayna. The Koya, Domjala, Oudanulla, Kodalkati, Gumanmardan, Morer, Katasi, Singgiha, Anupnagar, Malangcha, Patharghat, Bangsnai, Pagla, Brahmani, Duyarka, Bhimsar, Maruka Motihara, Maur, Singguru, &c. are among the numerous rivers, streams, torrents and marshes, which flow into the southern side of the Ganges in its course along the Bhagulpoor district.—[Ed.]

*Lakes and Marshes.*—In this district pieces of stagnant water, exclusive of pools in rivers, which in the dry season lose their current, are usually divided into two classes : *jhils* which contain water throughout the year, and *chaongr* which dry up in winter. Some of the *jhils* are evidently the old channels of large rivers, which at both ends have lost all communication with the stream ; but are so filled with water during the periodical rains, that in spring they do not become dry. In this district, however, such are neither large nor numerous. The principal *jhils* here are a kind of lakes, that is low lands, which collect a great quantity of rain from floods and torrents, and that never become dry. The most conspicuous of these is Domjala south from Rajmahal, a noble piece of water, the banks of which were intended by Kasemali for the seat of a luxurious retirement. In the rainy season this lake is said to extend about seven miles from east to west, and from three to four miles from north to south. In the dry season it is about four miles long, and from one to one-and-a-half wide, nor does this diminution reduce the beauty of its banks, so much as might be expected ; as it does not leave a fetid mud, or barren sand ; but as the water retires, the banks are cultivated with spring rice.

Between Domjala and Rajmahal is another lake called Ananta Sarabar, which in the floods is of considerable size, but in the dry season is reduced to too small an extent, and is too dirty, and too much overwhelmed with weeds, to be an ornament to the vicinity ; but it is not a nuisance, the land which it leaves being cultivated. The marsh into which Domjala empties itself, and which runs south from Udhawana, is of very considerable length ; but in general it is narrow, and in most places is so shallow, and so much choked with weeds, that it cannot be with propriety called a lake, except about its middle, where it swells out to a large size, and is called Chandsarjhil. In January this forms a pretty lake. There are many other *jhils*, particularly on the north side of the Ganges, but none of them of such a size as to deserve particular notice. The *chaongrs*, which in the floods are lakes, but soon after become dry, are of much greater extent, and seem to be on the increase.

One of the most considerable is situated south and west from Mungger, and in the time of Major Rennell would

appear to have been a lake. The Zemindars indeed allege, that it always was in its present state; but I think this is very doubtful; as they might be naturally afraid of acknowledging an acquisition of such a vast value; for it is said to contain 14000 bigahs customary measure, amounting to about 8700 acres, which every year yield, with scarcely any trouble, a crop of wheat, barley or pease. The change from a lake to a Chaongr is indeed very natural. The violent torrents of this country, and the turbid waters of the Ganges, poured in during floods, leave on stagnation so much sediment as to produce a great effect, and the enormous evaporation, soon dries up every thing that is not fed by a perennial stream.

A much more extensive Chaongr is situated south-east from Mungger, extending parallel to the Ganges, from near the rock Dholpahri for at least 12 miles to the east, and being from one to three miles wide. This land is almost totally neglected, and is considered as useless, although the greater part seems exactly similar to that now mentioned as so valuable. Part however is of a poor soil, and part dries up too late for sowing wheat, but would undoubtedly answer for some other crops.

South-east from Bhagulpoor are also two extensive Chaongrs, Elawa and Banggararajor, which are both considered as entirely useless, and left to produce the wild rose (*Koyakangta*), which they do in luxuriance, a sure proof of a rich soil. They are however late of becoming dry. On the north side of the Ganges the Chaongrs occupy a great extent of land, and are considered as totally useless. None of them that I saw are large, but they are very numerous, and scattered in all directions; and as they do not become dry until January, or even February, they render the country very difficult of access to the traveller. They are everywhere overgrown with the tree called Hajar, and the wild rose, and might, no doubt, produce spring crops of millet; but perhaps their greatest value will always be for pasture, the moisture, which they retain until spring, enabling them to push out a verdure, which at that season is totally unknown in the neighbouring plains.

**METEOROLOGY.**—South winds are very uncommon in this district, in the greater part of which the east and west winds prevail throughout the year; the former being about the

middle of June, and the latter about the middle of February, so that the east winds last double the time of those from the west; but they blow with less violence. When these winds change, and they are far from being regular, they seldom come from the north, and still more rarely from the south; but change to the opposite point from what usually prevails at the season. This year 1811, for instance, during the greater part of the season, in which the westerly winds should blow, those from the east have prevailed, and have been very strong. The most usual deviations from this rule are the storms from the N. W., which are very frequent from the middle of March until the middle of May; but in the eastern part of the district towards Moorshedabad there is a much greater deviation, the north wind usually blows from the middle of October to the middle of February; and from thence until the middle of June the regular winds, which are west, frequently change to south, and sometimes to north. These deviations seem to be owing to the influence of the Bhagirathi. The winds are not near so strong, and on the whole much more irregular than in the western parts of the district, where the influence of the Ganges is less disturbed. The rainy season usually lasts from the middle of June to the middle of October, but in favourable seasons during spring there are frequent showers, especially with the squalls from the N. W. These are often accompanied by hail, sometimes of a size that would not be safe to mention in Europe by any one who was afraid of being the scoff of the vulgar. All on the south side of the Ganges, if the seasons are favourable, there are between the middle of October and the middle of November one or two heavy falls of rain; but such rains often fail, and on the north side of the Ganges the farmers think them prejudicial. In December and January there is in some years, as this 1810-11, a good deal of rain, which is highly injurious to the crop of wheat, but improves that of barley.

In the morning there are usually fogs from the middle of December until the middle of February, but this year I did not observe them more than two or three times. Dews are pretty copious from the end of the rainy season until the middle of April, but gradually diminish as the season advances. The climate on the whole is much drier than that of Dinajpoor, and still more than that of Ronggopoor. It seems even considerably drier than Puraniya, and the hills

of Bhagulpoor seem rather to contribute to dryness by the reflection of the sun from the rocks. The winters I imagine are in general less cold than in Puraniya, this one, 1810-11, was very much so, and the natives thought it as severe as usual. They always however at this season sleep by a fire, and suffer much being very poorly clothed. They often talk of frost destroying the crops after strong westerly winds, and one such day was said to have happened this year. I was not up early enough to ascertain whether or not it actually froze, but a little after sun rise I saw no appearance of any such degree of cold. The climate, however, at least on the south side of the Ganges, is favourable for the artificial production of ice, and children from the middle of December to the middle of February frequently amuse themselves by the process. In the evening they boil some water, and expose it in shallow unglazed earthen pans to the wind. In the morning the pans are found covered with ice. A west wind is as necessary to the process as boiling, and operates by increasing the evaporation, as the west winds here are always uncommonly dry. I presume that the boiling operates in the same way, the sudden attraction of air by the boiled water contributing to that decomposition of its elements, in which the invisible evaporation of water in a great measure, I imagine, consists.

The heats of spring, when the wind is westerly, are very severe, these winds being hot and parchingly dry. In the eastern corner of the district the winds are only hot when they come from the south. In general the east wind is moist and temperate; but in May, 1811, the east winds, which at Mungger blew strong through almost the whole month, were often hot and parching. Towards the autumnal equinox the heat which is moderated by the periodical rains becomes very severe owing to the want of wind, but the nights become cool about the middle of October and continue so until August. The hills are no where of a height to reduce the temperature of the air in any considerable degree; and the reflection of the sun's rays from their rocks, and the shelter from winds that their forests afford, renders the parts among the hills hotter than the plains; so that the mountaineers when in the open country complain much of cold, and the sepoys of that tribe are uncommonly subject to rheumatism.

## CHAPTER II.

HISTORY, TOPOGRAPHY AND ANTIQUITIES OF BHAGULPOOR, ETC. ETC.

In no part have I found fewer, or more discordant traditions, concerning the history of the country; nor have I any where seen people so little interested about this important subject, a knowledge of which seems to be the most effectual of the means by which man is elevated above the brute, and by which his most dangerous prejudices and degrading propensities are most readily counteracted. It is commonly said, that in this district there are comprehended a part of four ancient countries distinguished in Hindu legend, Angga, Gaur, Mithila, and Magadha.

Angga, according to the most commonly received opinion, and according to the traditions of the inhabitants, is bounded on the east by Gaur, on the north extends to Baidyanath, and on the south to Bhuvaneswar, so that it comprehends the division of Lakardewani, and part of Kalikapoor belonging to this district; but I shall not enter into any investigation of its history; as in visiting the small portion of its most remote and rude parts contained in this district I have procured scarcely any materials; and as at a future period I intend to examine a greater and more improved portion.\*

In the account which I gave of Puraniya I have stated, that the whole of Gaur is contained in that district; but here I am informed that I was mistaken, and that the eastern parts of this district, as well as the whole banks of the Bhagirathi from Gaur city to the sea belong to that territory. I cannot take upon myself to decide whether the people of the Puraniya district, who considered the Ganges as the boundary, or those of this district who allege that they belong to Gaur, are most accurate; nor have I any thing new to offer concerning the history of the place. All the portion of this district that is situated beyond the Ganges belongs to the territory of Mithila, concerning which I can say nothing in addition to what has already been stated in my account of Puraniya,

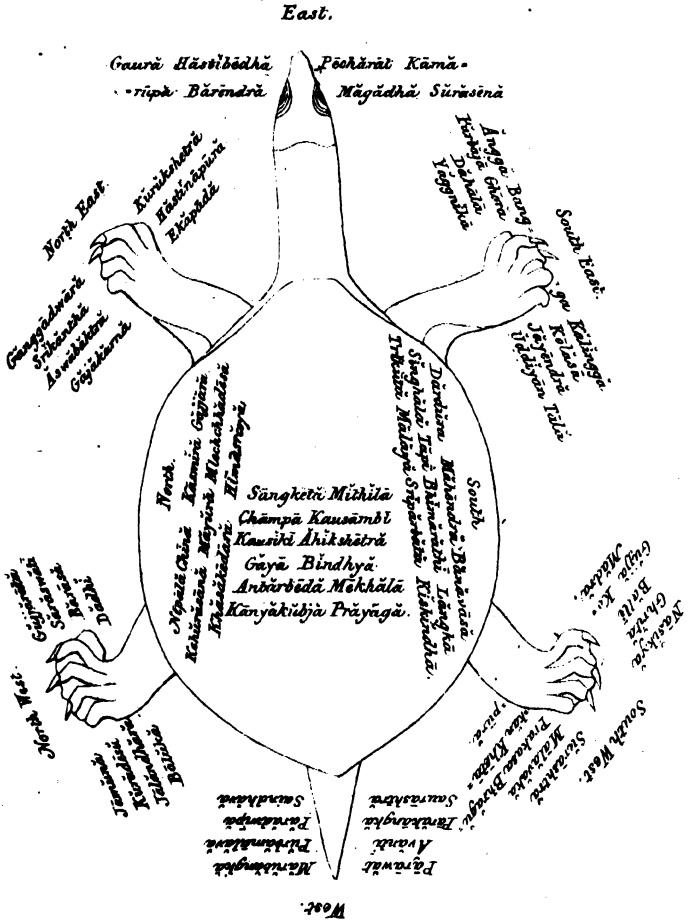
\* See Vol. iii.

only that this portion would appear to have been annexed to the Muhammedan kingdom of Bengal by Hoseyn Shah. This induces me to suspect that the Audisah, which in my account of Dinajpoor I stated to have been conquered by that prince, was not the province which we call Orixá, the Oriswá of the vulgar, but the Oriswá of the northern parts of Mithila, called Odyssa by D'Anville, as mentioned in the account of Puraniya.

There remains only to be mentioned the country called Magadha, a subject, so far as my opportunities of knowledge yet extend, that is involved in some difficulty. In a paper written by Dr. Leyden, that gentleman supposes, if I am correct in quoting from memory, that Magadha is the country of the people whom we call Muggs, a supposition in which I believe he is perfectly singular. The term Mugg, these people assured me, is never used, by either themselves or by the Hindus, except when speaking the jargon commonly called Hindustani by Europeans, and it is totally unknown to the people of Ava; but whether it is of Moslem, Portuguese, or English origin, I cannot take upon myself to say, many words among the natives being now in use as English, which it is impossible to trace in our, or indeed in any other language. The original country of the Muggs, which is the district of Chatigong, although the name has been extended also to Aracan (Rakhain) is by the Hindus called [blank in MS.] This opinion therefore occasions little or no difficulty; but it is not clear, in the opinion of some Pandits, whether any portion of this district belongs to Magadha, although in the part of it that is situated west from Teliyagarhi, the vulgar most usually consider themselves as occupying a portion of that territory. In the Saktisanggam Tantra, one of those revealed by the god Siva, but to whom I have not learned, is a chapter called Desmala, dividing Bharatkhandá or the country then known to the Hindus into 56 territories. A division into this number seems pretty universal among all the sects and nations of Hindus, and in my account of Mysore I have given a list of the division that is adopted by the Brahmans of the south; but in different parts the division seems to differ greatly, and that contained in the Saktisanggam Tantra, used in Behar, differs very essentially from that of the south, 23 of the divisions mentioned in each list being unnoticed in the other. In the Saktisanggam Tantra it is stated, that Ma-







Division of Bhavatkhandā into 9 Kingdoms,  
according to the hook called Swarodaya.

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gadha extends from the temple of Vyasēswar Siva on the Vindhyan mountains at the frontier of Gaur, to Vyaskunda, which is on the Karmanasa river. According to this authority the greater portion of this district is in Magadha, as indeed is usually allowed; but in the Vayupuran again, one of these attributed to Vyas, it is said, that Magadha extends from the Karmanasa (Caramnassa R) to the Kilbishi or Kiyul, and from the Gangga to the Vindhyan mountains, in which extent no part of this district, except a small part of Gidhaur, is included.

The oldest traditions current respecting the portion of this district, which is supposed to have been a part of Magadha, and which no doubt at one time belonged to the sovereigns of that country, are, that it was the scene of some of the actions of Ram or Bacchus; but the fables concerning this personage scarcely come within the scope of history, and what is related shall be mentioned in the account of the places of worship that are situated in the division of Mungger. The cosmographies of the Hindus it must be observed have undergone many changes. One which is called Swarodaya, and which is said to be more ancient than that detailed in the Pangchamaskandha of the Sribhagwat, now most commonly current among those who study the Purans, is said to have been originally composed by the god Siva, but was revealed to mankind by Narapati, a holy man, whom many Europeans may probably consider as the author; but even he is supposed to have preceded Vyas, the author of the Bhagwat. In this system of cosmography Bharatkhandā, or the country known to the Hindus, is represented as occupying the back and members of a tortoise, in place of occupying the southern corner of Jambudwip, the whole of which, according to the Bhagwat, occupies only the centre of the tortoise's back, the extension of knowledge in the time of Vyas having rendered the old doctrine totally untenable. In the older system a country called Madhyades, or the central territory, occupies the tortoise's back, and is surrounded by eight other divisions, which occupy the head, tail and limbs of the animal.\* The northern parts of this district on both sides of the Ganges are generally said to belong to Madhyades, the name by which the people of Nepala now distinguish the Company's

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\* See Plate I, Bhagulpoor.

territory, in which indeed a great part of the ancient Madhyades is included, for in the Swarodaya the following provinces of the Madhyades are mentioned—Sangketa, Mithila, Champa (Champanagar near Bhagulpoor), Kausambi (towards Dilli), Kausiki, Ahikshetra, Gaya, Bindhya, Antarbeda, Mekhala, and Kanyakubja. It must be remarked, that in this list neither Magadha nor Kikat, said to be an older synonymous term, are used, although Gaya in the centre of Magadha is included. Madhyades was no doubt the country of the author of the Swarodaya, as being placed in his centre of the earth, and it then probably formed a powerful kingdom, or at least the author retained a knowledge of this having once been the case; but now all memory of such a circumstance is extinct among the people here, although it would appear probable that it may have been the kingdom of the Barhad-rathas mentioned by Major Wilford in his curious paper on the kings of Magadha (*Asiatic Researches*, vol. 9), for Puru, the ancestor of that dynasty, is said by the learned Major to have obtained the central parts of India from his father Jajati; but concerning this dynasty, as usual in all investigations of Hindu antiquities, there arises a monstrous difficulty. The 14th in descent from Puru was Jarasandha, who was contemporary with Yudhishtir, and who was succeeded by 22 monarchs of this central and most powerful part of India; but according to the opinion commonly received among the Hindus, Yudhishtir and his descendants were sovereigns of India for many generations. In this district some remains are at present attributed to princes of both dynasties, and in order to reconcile the above mentioned difficulty I must return to the observation lately made, of the term Magadha not being mentioned in the provinces, which according to the Swarodaya composed Madhyades, although this no doubt included Gaya, that is situated in Magadha. I presume, on this account, that it was the ancestors of Jarasandha who were the sovereigns of India and of Madhyades, and that in this high station they were succeeded by the dynasty of Yudhishtir of Hastinapoor, who allowed the descendants of Jarasandha to retain as tributaries a part of their old territory, which then assumed the name of Magadha. Jarasandha, who seems undoubtedly to have been the sovereign of India immediately before Yudhishtir, is commonly indeed called the Raja of Magadha, and Major Wilford says, that

he it was who first gave the country that name, it having previously been called Kikat ; but I think it not unlikely that the name Magadha was not known until the time of this prince's descendants, who, as I have said, were not probably sovereigns of India, but subordinate chiefs, for high sounding titles, that may occasionally be found connected with their memory, must in India be considered as of very little weight.

The remains supposed to be next in antiquity to those of the dynasties of Jarasandha and Yudhishtir are attributed to a Karna Raja of Magadha ; but, as will appear from Major Wilford's account of the kings of Magadha (*Asiatic Researches*, vol. 9), the number of persons thus named is very considerable, and the eras in which they lived very different, from 13 or 14 centuries before our vulgar era, until four or five centuries after its commencement. To the above curious treatise I shall refer for more full information on the subject than I can undertake to give. I shall only venture to observe that the table of the kings of Magadha constructed by Major Wilford, although compiled with wonderful ingenuity from the discordant materials of the Purans, would seem to require much revision and abbreviation, as in order to protract the time the same personages seem to be very frequently repeated. It may be especially remarked, that Major Wilford in one part (*A. R.* vol. 9. page 105), following the confused nature of his materials, thought that he had identified the six Pala kings mentioned in the inscriptions published in the first volume of the *Asiatic Researches*, with the Andhra kings of the Hihaiaya tribe descended from Sri Karnadeva, who is placed in the third century of our era ; yet these Pala kings he afterwards acknowledges (page 203) to have lived at the time of the Muhammedan invasion, and the first of them on good authority is allowed to have lived in the beginning of the 11th century of our era. According indeed to the interpretation of these inscriptions given by Mr. Wilkins and Sir William Jones, by which probably Major Wilford was at first guided, these princes governed about the commencement of our era ; but Major Wilford on strong grounds since contends that the era Somvat, which is mentioned in the inscriptions, does not imply the era of Vikrama, as these gentlemen supposed, and an inscription (*A. R.* vol. 9. page 206) found at Benares ascertains that Sri Deva Pala, mentioned in the

other inscriptions, was alive in the year of Vikrama 1083, which according to different hypotheses may be either the year of our Lord 1027 or 1017. I shall therefore consider the eras of the antiquities which I have to describe, and belonging to these two dynasties, as tolerably ascertained. There can be little doubt, I think, that there were at least seven kings of the family of Karna, who were the most powerful Indian princes of their time, who began to reign at no long interval after the destruction of the dynasty of Chandra-gupta, and whom Major Wilford, by ingeniously tracing them in Chinese history, finds to have enjoyed a most extensive sovereignty until about the middle of the seventh century of the Christian era (A. R. vol. 9. page 112). This dynasty seems to have resided chiefly in this district, and to have rendered Magadha the most eminent province of India.

The family of the Palas also in its inscriptions claims universal dominion, and at the time of the first Muhammedan invasion seems to have possessed at least the greater part of the country watered by the Ganges. The princes of this family seem to have governed from the end of the 10th until the 12th century of the Christian era, when the Moslems seized on the western, and the Bengalese on the eastern parts of their dominions. It is unquestionable that the Pala Rajas were Buddhists, and I think it somewhat probable that the Karnas were of the sect of Jain, as Champanagar, evidently their chief place of residence, still contains traces of that worship, and as they do not appear to be favourites with the followers of the Purans (Asiatic Researches, vol. 9. page 113). In the south of India the Jain boast of having destroyed the Buddhists. Here a contrary course of events seems to have taken place, and Sakya, in the north at least, seems to have restored the doctrine of the Buddhists after its enemies had overwhelmed the followers of his predecessor Gautam.

Between the times of these two dynasties I have met with some traces by which I was a good deal surprised. The country we call Tanjore, south from Madras, in the Sangskrit is called Chola, and in my account of Mysore I have mentioned that the Chola Rajahs were powerful princes, and in the south are said to have erected many temples all over India. Several of these I have seen in Karnata, but they are in a

style much superior to some ruins, attributed to a Raja of Chola, which this district contains. This however may have been owing to the rudeness of the country which did not afford workmen. It is pretended at Baidyanath that Aditya Sen Raja of Chola, and sovereign of the whole country surrounded by the sea, built not only Baidyanath in Virbhum, but Mandir in this district, as well as other temples in adjacent territories. At Baidyanath it is supposed that this happened in the Satya yug ; but, as I have said in my account of Mysore, the Chola Rajas governed from about the fifth to the seventh centuries of the Christian era. If the Chola Rajas of the south ever extended their dominions here, it must have been in a sudden invasion made by Aditya Sen, who with an army may have traversed India, compelling all the petty Rajas to pay him tribute ; and he may have left behind him some officers who may have retained some part of the country as tributaries, and totally unconnected with their countrymen of the south. In this district the Cholas would now appear to be perfectly extinct. The Rajas of Chola were protectors of Sangkaracharya, and among the first who adopted the doctrines that are now considered as orthodox by the sect of Siva.

The last Hindu prince of consequence, of whom I find any traces, was a Raja Indradyumna, who has left considerable traces in the western parts of the district, and, it is said, in the adjacent parts of Behar, over both of which he is said to have been king, after the Muhammedans had obtained possession of Delhi. Finding himself unable to contend with these ferocious invaders, Indradyumna retired with his army and family to Jagannath. It is universally agreed that the temple there was founded by a prince of this name, but the Brahmans will not allow that a place so distinguished can be of so very modern a date : nor can I take upon myself to say that they are mistaken, but the subject seems to require farther investigation. Whether or not Indradyumna was a person of the family of the Pala Rajas, or a person who on their fall had seized on Magadha I cannot ascertain, but I think that the former is most probable. The Karna Rajas were undoubtedly Andhras, that is, belonged to the country near Hyderabad ; and there is reason to think that the Pala Rajas, although not descended from the royal family were descended from

their servants, and were therefore probably of the same nation. On losing the Gangetic provinces a powerful dynasty still retained the original country of the Andhras, and the ancestors of Pritapa Rudra long governed at Warangol, as I have mentioned in my account of Mysore. I suspect that Indradyumna was the ancestor of Pritapa Rudra, who retired to the ancient dominions of Andhra, and having collected the powerful remnants of an overgrown empire, may have actually founded Jagannath, the vicinity of which no doubt belonged to the Warangol dynasty of Andhra princes. Major Wilford justly observes, that the Andhras were powerful in the time of Pliny, and they continued in possession of regal authority until the overthrow of Vijayanagar, in the 16th century of the Christian era, so that among the Bengalese, and even in the mountains of Nepal, Tailangga, one of the names of the Andhras has become the word in common use to signify a soldier. The tradition in this district is, that Indradyumna was a Bandawat Rajput. Some allege that the Bandawats are an impure tribe, some of whom still reside in the Ramgar district; while others maintain that the Bandawats are pure Rajputs.

From the time of Indradyumna until the English obtained the government of Magādhā, the greater part of this district seems to have been in a constant state of anarchy. Some indeed of the original tribes seem never to have been reduced by the Hindu followers of the Brahmans, and many of them seem very lately to have put themselves under the guidance of the sacred order. These rude tribes seem to have always skulked in the hills and woods, rendering a very precarious and irregular obedience to the governors of the plains; while numerous adventurers from the west found a settlement among these rude people, and by superior treachery and ferocity brought them under obedience to themselves, without, in general, rendering the country more settled. Even during the government of Shuja Shah, when the Mogul government was in the highest vigour, and when this prince resided in the district, some part of the plains was subject to petty chiefs that despised his authority. The first considerable eruption from the west was of a tribe called Kshetauris, who subdued the Nat and Bhungiyas, and were succeeded by Rajputs. As several of these tribes remain in possession



of estates, I shall, in treating of the landholders, have occasion to give such relations, as I have heard, concerning the progress which these invaders made; and in treating of the different tribes and castes, I shall mention all that I know concerning the less remarkable chiefs who conducted the anarchy to which this wretched territory was so long a prey.

I find no traces of any part of Magadha having belonged to the Hindu kingdom of Bengal: but Hoseyn Shah annexed the whole of it that belongs to this district to the Muhammedan kingdom of Gaur, and secured the richer parts of it by strong fortresses, especially that of Mungger. From this power it would not appear to have been wrested until the reign of Akbur, from whose time, as I have said, the Moguls enjoyed a nominal authority over the whole, and possessed the banks of the Ganges; but their government seems to have been constantly disturbed by the invasions and refractory disposition of the chiefs residing in the wilder parts. Mogul officers of rank usually resided at Rajmahal, Bhagulpoor and Mungger; and the former seems to have been a favourite place with the Moslems of rank ever since Shuja Shah, the brother of Aurungzebe, made it the seat of the government of Bengal and Behar.

In Bhagulpoor I am told that there were the following Amels or governors, appointed by the Subahs of Bengal. In the reign of Muhammed Shah there were Delazag Khan, Reza Jammun Khan, Rahimdad Khan, Alikulibeg, Amiruddin Khan, Hendali Khan, and Alijawed Khan. In the reign of Ahamud Shah there were Alikuli Khan, Bahamun Khan, and Alikuli Khan. In the reign of Alumgir there were Subkhuruli Khan, Jafurali Khan, Sayed Mukurem Khan, and Sheykh Fakhuruddin. In the reign of Shah Alum there were Mir Musoudali, Sultan Daud, Waresali Khan, Sadqralhuk Khan, and Zaynulabdin Khan, who was succeeded by an English gentleman. These officers in general were of inferior rank to the governors of Puraniya, few of them having been honoured with the title of Nawab. Kasem Ali, on quarelling with the English, seems to have intended this district as his place of residence. He dwelt for some time at Mungger, was erecting a very great palace at Rajmahal, and intended to secure his independence by a line of fortifications erected at Udhawanala. The forcing this by Major Adams, in 1763,

put an end to these visions ; but the turbulence of the chiefs of the interior increased with the utmost violence, and Captains Brooke and Browne were for several years employed in a miserable warfare with these tribes, in which they seldom seem to have been supported by Government, so as to be able to act with that vigour which the case required. Finally Captain Browne, by enormous concessions, induced the discontented to become quiet, and his concessions were confirmed by Mr. Cleveland, the civil officer, who succeeded him in authority over the wilder parts of the district.

**KOTWALI OF BHAGULPOOR.**—This small division includes the capital, Bhagulpoor. In the centre of the district, round the town, the land is high and swelling, and in a few places rises into little hills too steep for the plough ; but in general it is excellently cultivated and finely planted. North from the town most of the country is liable to the inundations of the Ganges, but extremely fertile. It is however very bare, and does not look well, the villages being naked. South from the vicinity of the town also the country is very low, and in the rainy season almost impassable, but, except in occasional floods for two or three days at a time, it is not inundated. The soil in many parts is rather poor, but it is well cultivated, finely planted, and would be very beautiful were it not that the huts are wretched, and not concealed from view by fine plants, as is usually done in Bengal. In this division there are no woods, and the plantations consist chiefly of mangoes, with many Tal and Khajur palms, but scarcely any bamboos. The houses of the Europeans are more numerous than might be expected from the small society, several of them being unoccupied ; and as some of them are large, and all scattered round the town in very fine and commanding situations, they add very much to the ornament of the vicinity. The natives have 150 houses of brick, all in a very bad style, and none of them respectable in size. There is a jail and hospital of brick, neither of which is any ornament to the place. There are many small mosques and other places dedicated to the religion of Muhammed, and built of brick. Although they are all small, and most of them are ruinous, they are in by far the best taste of any such as I have yet seen in the course

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\* The Kotwal is a native police officer, who has a town or district under his jurisdiction.—[Ed.]

of this survey. In particular the monument of Ebrahim Hoseyn Khan, at Khunzurpoor in the east end of the town, and said to have been built about 150 years ago, is in an excellent taste. It is a square building, roofed by five neat domes, and is built in a style of plain neatness, so that the grace of its proportions is not as usual frittered away in an awkward search after ornament. The natives are not insensible to such merit, and fable that the Nawab, by whom it was built, cut off the hands of the architect, lest he should ever design a rival to this favourite work.

The Zemindars of the district erected to the memory of Mr. Cleveland a monument of brick, which is a lofty building, placed in a very conspicuous situation, and at a distance makes a good show. It consists of a Hindu pyramid, of the most cumbrous rudeness, surrounded by an ill designed Grecian gallery. A monument of stone, with an inscription highly approving of his conduct, was sent by the Court of Directors from England, and placed in front of the house which the same gentleman had occupied when alive. No pains have been taken to preserve this handsome work, and wild fig-trees have already fixed their roots in the crevices, and in a few years will demolish the whole. The town of Bhagulpoor, (or the abode of refugees,) although reckoned to extend two miles in length, and from one mile to half a mile in width, except that it is in a beautiful situation, is a very poor place. The houses of the Europeans and the Moslem places of worship are great ornaments; but the town consists of scattered market places, meanly built, and owing to the declivities of the ground, very inconveniently situated. Through and round it however there are tolerable roads, and a few trifling bridges. The most compact part is the market place called Shujagunj, in which there are three or four streets closely built. The other market places are Saray, which has also some compact buildings, Yogeswar, Munshur-gunj, and Khunzurpoor, in which last the courts of law are held and the office of the collector is situated. No estimate could be procured from the native officers of police concerning the number of houses contained in the town. My people, after examining the whole, think that they may amount to about 5000, but rather more than less, and the alleged importation of commodities from all the vicinity would imply a

very considerable population, at least to the rate of six persons for each house. The markets are very badly supplied, and the price of almost every thing is enormously high when compared with that demanded in other parts of the country. Lakshmigunj and Champanagar may be considered as one town; they are very populous, and tolerably compact. They may contain about 1500 houses, mostly occupied by weavers, who have some religious buildings of brick. Nathnagar, a little south from Champanagar, is also for this country a good town, containing perhaps 900 houses, and is the residence of traders.

The Roman Catholics have at Bhagalpoor a small church. The place of worship that in general is considered as most holy by the Moslems is the brick monument (Durgah) of Mogulana Shahbaz, close by the Thanah. It is by no means remarkable either for size or elegance, but daily offerings are made by the people of the vicinity, and many strangers frequent it in the month Aswin (from September to October.) A Fakir has the charge and emoluments, and is called Mozouwor. The monument (Durgah) of Pir Shah junggi Shahbaz is larger than the last mentioned place of worship, and enjoys a remarkably fine situation on the top of a small hill about a mile from the office of police; but the buildings are very rude. About 1000 people from the vicinity assemble on the day of the saint, and no less than 20,000 on the day Kurbula, when all the gaudy pageantry, used in celebrating the memory of the grandsons of the prophet, are thrown into a large pond at the bottom of the hill. On both occasions the keeper (mozouwor) has some profit.

Among the Hindus the chief place of worship is the Ganges. On the full moon in the month Magh, about 25,000 people, of whom 20,000 are strangers, assemble on the banks near Barari, and bathe at what is called Dira-ghat. Formerly they bathed at Shukkurpoor on a Dira, or island in the Ganges; but, this having been carried away, they have retired to the high shores near Barari.

The old heretical sect of the Osawals have in this division two remarkable places of worship, remnants, if I am not mistaken, of the religion which prevailed during the government of the Karna Rajas. As the sect is here completely extinct, farther than that one or two attendants on these temples still reside, I shall now state all that I have to say on the subject.

At Bhagulpoor I was informed, that at Champanagar there was a temple, where the Osawals worshipped Parasnath under the form of the Phallus (*Lingga*); but on going to the place I found, that this was a mistake, owing probably to the ordinary and natural inclination of my informants to twist every thing to their own doctrine. There are two temples of considerable size, built of brick, and covered with plaster, the ornaments on which are very rude. The one has been lately rebuilt, and the other is not yet quite finished, both entirely at the expense of such of the family of Jagat Seth, the banker, as still adhere to the worship of their fathers, although the chief has adopted that of Vishnu. The two buildings are nearly in the same style; they are square, and consist of two stories. In the centre of each story is an apartment, which is surrounded by a narrow open gallery. The upper apartment is covered by a dome. The stairs, which are in the thickness of the wall, are, as usual in native buildings, to the last degree miserable; but the view from the roof is admirable. In the lower apartment of the temple, that has been finished, are small images of white marble representing the 24 deities of the Jain religion, sitting cross-legged, and exactly resembling the images worshipped by the Buddhists. The images worshipped are not only totally unlike the *Lingga*; but the temples are not dedicated to Parasnath, as was pretended, but to Vasupuiya. The Pujaris are the only people of the sect who reside at Champanagar, and were fat men, totally illiterate; nor could they give me the least account of the history of the place, nor of the sect. Many pilgrims, especially from Marwar in the west of India, are said to frequent these temples.

The other place of worship belonging to the Jain is at Kabirpoor, at no great distance from Champanagar. In the neighbourhood it is usually called Vishnu Paduka or the feet of Vishnu, which the hasty ill informed people, who make the Jain and Buddhists branches of the followers of Vishnu, would no doubt consider as proving their theory; but this is a name given only by the vulgar, and both Brahmans and Jain agree, that the object of worship here represents the feet of the 24 deities of the Jain, which the inscription states to be those of Vasupuiya, who was born at Champanagar or Champapuri. This emblem of the deity is very rudely carved,

and represents the human feet. The inscription\* between the feet mentions the name of the god. That before the toes implies, that it was made by Singheswar Stati, Kundakundacharya Bhattaraka, Kumudachandra Stati, and Dharmachandra Upadesya of the fortunate place Tajapattar, and of the tribe (Jatau) Bagherwal. The date, according to the reading of the Pujari, is in the year of Sambat 694, and of Sak 559; but before each is a mark (q) resembling the Hindu cypher that represents one, which would make the date 1694 of Sambat, and 1559 of Sak, or A. D. 1637. The Pujari asserts, that in Jain inscriptions this mark is prefixed to all numbers, and has no value. The inscription on the front of the stone is an exhortation to the believers in the Jains to worship the feet of Vasupujya; but some parts of this inscription, although fairly written, are not understood by the Pandit of the survey, who says, that it contains words, which seem peculiar to the sect. The stone formerly was in a small temple; but, when I visited the place, in order to have the building repaired, had been moved to the house of the Pujari. In front of the temple are two hollow columns of brick, with a spiral stair in the centre of each. These are called Manikasthamba, or in the vulgar dialect Maniktham, which may perhaps throw some light on the history of the pillar, so named, near Dhamdaha in Puraniya. One of these columns has apparently inclined from the perpendicular, but both are in good condition. The Pujari says, that his father was a Maithila Brahman, and a follower of Vyas, to whose doctrine he also adheres; but a woman of great riches, named Yamuna Bai, and descended from the original founders, having some years ago come from Karinja in the south, near the sea, settled an endowment on his father to induce him and his descendants to act as Pujaris. On this account they have received instruction from the Jain sufficient to enable them to perform worship, and to satisfy the curiosity of pilgrims. I suspect, however, that they are heretics, who, feeling this title disagreeable, pretend to be followers of Vyas. I met with no one, who could tell any ancient denomination for the country. Bhagulpoor seems to be a name of no considerable antiquity, and is said to have been given by the Mogul officers, who collected a number of fugitives, and defended

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\* See Plate IV.—Bhagulpoor.

them in the plains from the violence and depredations of the disorderly chiefs of the interior. It formed a part of Serkar Mungger.

The place of most remarkable antiquity according to the Pandit of the mission, is a cave and subterraneous gallery overhanging the Ganges at Mayagunj, a little east from the town. He alleges that this was the abode of Kasyap Muni, the son Kasyap, who was made by Brahma at the creation of man. Kasyap by various wives was father of many of the petty gods (*Devatas*), besides infidels (*Daityas* and *Asurs*), devils (*Rakshas*), warriors (*Danab*), monsters (*Rahu* and *Ketu*), birds, serpents, &c. Besides this multifarious offspring many Brahmans, in no manner different from ordinary men, claim a descent from Kasyap, who is also claimed by the Buddhists as one of the lawgivers of their sect, who preceded Gautam. Without attempting to explain such difficult matters I must observe, that the peasants in the vicinity of the cave give an account more suited to my capacity. They say, that it was the residence of a hermit, who lived about 150 or 200 years ago, that is some time before they remember: but that, until the English government, the small hills around were covered with thickets, among which no one ventured, as they sheltered thieves and wild beasts. The cave in fact, is very small, and unfit for the father of such a progeny at Kasyap possessed. It has been dug in a dry hard clay containing calcareous concretions. The roof is low, for the pillar, by which it is supported, is not six feet high. Two narrow subterraneous galleries lead from this cave, and are said to terminate, in small chambers, at a considerable distance. About 15 years ago one of these was opened, and in it was found the skeleton of a man, who from the position of the bones, Mr. Glas the surgeon of the station, then present, supposed to have died in the spot. These circumstances would rather seem to point out the cave as the retreat of a robber than as that of an hermit; although it is not unlikely, but that the same person may have united both professions.

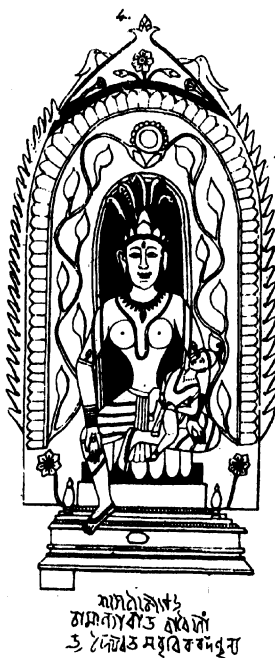
Between Champanagar and Bhagulpoor is situated Karnagar the chief residence of Karna Raja. The ruin is exactly in the same style with that in Puraniya, which is said to have been the house of Kichak, contemporary with the Karna to

whom this work is attributed, that is it consists of a square rampart, without works, but surrounded by a ditch. There is no cavity within the rampart, the ruins having been sufficient to fill up the whole space, which is still very high. The hill-rangers are now cantoned on the ruins, which are finely adapted for the purpose, as they are dry, level, and of abundant extent both for quarters and for a parade. The people in the vicinity pretended to me, that this Karna was the half-brother of Yudhishtir by the mother's side, and the style of the ruin is rather favourable to their opinion.

This opinion is also adopted by Major Wilford in his account of the kings of Magadha, (*Asiatick Researches*, vol. 9, p. 104), and he mentions, that this person taking part with Jarasandha, the opponent of his brother, was rewarded with a small kingdom, called after his own name Karnades, which long continued to be enjoyed by his descendants; and in one place Major Wilford mentions this as being the Bhagulpoor district; but in others (probably following the discordant tradition of the Hindus) this kingdom of Karna is considered as the same with the Angga or the western parts of Virbhum: perhaps the kingdom of Karna may have included both territories. All the Brahmans of this district however, that I have consulted concerning this Karna Raja disallow the idea of his being the contemporary of Yudhishtir, and consider him as a prince, who attempted to seize on the throne of Vikrama. As, however, there have been many Vikramas and many Karnas, all usually confounded together by the Brahmans, I shall not pretend to determine the discordant opinions; I shall only remark, that the princes of Champa named Karna where in all probability of the Jain religion, as Vasupujya the 12th great teacher of that school was born at their capital, and as the monuments of that religion are the only ones of note in that vicinity. It must however be allowed, that on the ruin at Karnagar there are two small temples, one of Siva and one of the Parwati, two gods of the Brahmans, and each is provided with a Pujari of the sacred tribe. These in the vicinity, although still tolerably entire, are attributed to Karna. Even allowing to this all due weight, the opinion of the heterodoxy of Karna, which I have mentioned, need not be relinquished, as the Jain admit not only of the existence, but of the worship of all the Devatas of the other Hindus.







In the ruin is also said to have been a Yogikunda, where the Raja is said to have kindled a fire when he prayed.\*

I must also remark, that in digging a tank in the immediate vicinity, the people of Mr. Glas, surgeon to the station, found four small images of brass, of which he allowed me to take drawings, (see plate 2.) No. 1 represents Chamunda, and No. 2 Mahishmardini, two destructive spirits worshipped by the Brahmans of the north; but No. 3 and 4 are considered by the Brahmans, whom I have consulted, as strange gods. On No. 4 is an inscription, which my people have some difficulty in explaining. It is dated after Parsa 925, I presume years after the era of Parsa, probably meaning Parasnath the 23rd teacher of the Jain. It is also dated at Champanagar; but the rest of the inscription, probably in the old Magadha or Pali language, cannot be explained. For the protection of the vicinity the Moguls had erected two petty forts. One in the town is completely obliterated, and of the other very few traces remain.

**RATNANGUNJ.**—This is a fully occupied and very beautiful country, especially towards the north-west, where there are some rocky hills finely wooded, while the adjacent country is thoroughly cleared, and adorned with numerous plantations, consisting almost entirely of mangoes, intermixed with palms. The villages however are poor, and the wretchedness of the huts is concealed by fences and bushes. There is no lake nor marsh of the least note. Two of the Zemindars have small houses of brick, but there are no buildings that can at all be considered as an ornament to the country. Amarpoor, containing about 200 houses, is the only place in the division that can be called a town.

There are no remains of remote antiquity. Between Ratnangunj and Amarpoor are the traces of a fort of considerable size, being above a mile wide, in the direction that I crossed; but it contains no traces of splendour, nor of any considerable strength. It is called Dumariya, and is said to have been in the possession of a chief of the Kshetauri tribe, who refused to submit to Sultan Shuja, and was destroyed by that prince, who afterwards erected near it two buildings, to which he occasionally repaired to hunt. I visited one of these

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\* See p. 39.

situated at a village called Banhara. It possesses neither great size nor elegance, and consists of a small tank surrounded, without the mound thrown out from the cavity, by a rampart of earth and ditch, so that even near his capital in the very strength of the Mogul government, the king's son was not safe in a hunting party, without a fortification to secure the place of his night's repose. In the day he of course hunted with an army.

KODWAR consists of three parts: the first low land surrounded by the Ganges, or near its bank, tolerably well cultivated, but very bare; this occupies the northern parts. Secondly, the central parts which are fine high swelling land, remarkably well occupied, and finely planted with mangoes, but few palms or bamboos, yet still very beautiful. Thirdly, the southern parts naked plains, in some places low and flooded during the rains; much neglected and very dismal, much of them being overgrown with stunted trees and thickets of prickly bushes, but abounding in game, and very favourable for the chase. Near the thanah are two small *jhils* or lakes, that contain water throughout the whole year. In this division there is no brick house nor temple.

Kodwar, although a small town containing about 200 houses, has neither shop nor market. The only other place in the division that can be called a town is Soulutgunj, a little east from the thanah. It is about the same size with Kodwar.

LOKMANPOOR is a large and tolerably populous division, of a very irregular inconvenient shape. Parts of Kotwali and Fayezullahgunj are either entirely surrounded by this division, or are hemmed in between it and the great Ganges; and its boundary with Kumurgunj is ill defined and keenly disputed. Although there is a good deal of marshy land, there is no one marsh of any considerable size. The country may be divided into four parts: First,—a narrow space near the banks of the Ganges, bare, but tolerably occupied. Secondly,—a very fine populous well occupied tract, beautifully planted with mangoes intermixed with some bamboos and a few palms, and extending from the above to the Tilyuga. Thirdly,—a very low neglected country, on both sides of the Ghagri, some of it overgrown with thickets of stunted trees and bushes, or with reeds and coarse grass; and fourthly,—a higher and better cultivated tract towards the north, of rather

a poor soil, but well planted, mostly however with mangoes alone, and productive chiefly of rice. The chief Zemindar has in his premises a ruinous brick house, very unsuitable to the extent and value of his estate.

Bihipoor, the residence of the Darogah commissioner and Kazi, is a large scattered place, containing about 300 houses, four of them brick, and carries on some trade. Besides there are the following small towns: Madhurapoor contains about 400 houses, Krishnagunj 150 houses, Chorhanda 100 houses, Bhawanipoor 150 houses, Pangchgachhiya 100 houses, Sibgunj 250 houses, and a subordinate factory belonging to the agent for supplying salt petre. The above places have weekly markets. Alumnagar has no market, but contains above 200 houses.

Pergunah Chhai, which constitutes almost the whole of this division, is called the country (*Velayet*) of a certain Muhammedan saint named Shah Mangun Auliya, who has an endowment in land, and receives annually one rupee, and one *man* of grain from each village in his territory, and 15 anas a month from government. The chief place of Hindu worship is Sibgunj-ghat, on the Ganges, where from 25 to 30,000 people assemble annually, on the full moon of Magh, to bathe. At the full moons of Vaisakh and Kartik 5 or 6,000 assemble at the same place.

GOGRI—like the last division, this consists of four parts; a narrow tract near the Ganges bare, but tolerably cultivated, except where the squabbles of contending landlords have prevented the granting of leases; a rich finely planted part bounding the former on the north, but less ornamented with bamboos than the similar portion of Lokmanpoor; a low neglected dismal portion on the banks of the Ghagri here very extensive, and more overrun with stunted woods and thickets; and finally high rice grounds, towards the north, rather poor, but well planted, almost entirely with mangoes. In this vast extent are only two wretched houses of brick, one of them ruinous. There is one neat but small mosque belonging to the Kazi. Gogri the capital, has much the resemblance of a Bengal village, being buried in fine groves of trees, and the houses being concealed by hedges; but it scarcely contains 100 houses, Rasulpoor, Raghunathgunj, and Setonabad are about the same size.

This country seems always to have been in a very rude

state, and the only remains of antiquity, except the mosques, are a few petty fortresses, probably of a more recent date. Chandalgar was the residence of a Raja of that low tribe, to whom part of Pharkiya belonged. Bhawardihi is another fortress that was the abode of a chief of the low tribe Bhawur, to whom Bahorsaha belonged. Mahadipoor, another petty fort belonged to a Goyala, the former owner of Sehazari. These low chiefs were destroyed by a colony of Rajputs, who still hold much of the country. They built several petty forts to protect themselves from each other, from the Chakoyars, a tribe of predatory Brahmans in Tirahut, and from the authority of the Moguls, for the country continued in a complete state of anarchy, until some time after the commencement of the government of Mr. Hastings. The Mogul officers also erected some forts; but the whole are trifling, and unworthy of particular description. During these disturbances, besides petty cuttings of throats innumerable, 10 or 12 battles of some note took place; and at each a Durgah, dedicated to some Moslem saint, was erected over the slain of both parties, whether Moslems or Pagans. These monuments are called Gung-sahid, and have trifling endowments.

KUMURGUNJ.—Some part of the division east-end, consists of low lands surrounded by the Ganges. At the west end are some hills and rocks finely wooded, and at their bottom some high rice land; but the great part of the jurisdiction consists of two long narrow lands running parallel to the Ganges, and of very different descriptions. That next the river is high, and consists of a strong red clay, containing in some places calcareous concretions. This is very fully occupied, and most beautifully planted with mangoe trees intermixed with a great many *Fal* and *Khajur* palms; but this is very narrow. The interior is very low, overwhelmed in the rainy season by water, and in the dry it becomes bare and dismal, and is almost totally neglected. Two brick houses belong to natives, and there are two religious buildings, that are some ornament to the country; more however from the fineness of their situation, than from any elegance or grandeur that they possess. The villages are not concealed by plantations, so that the wretchedness of the huts is fully displayed.

The largest place is Sultangunj, where there are about 250 houses, and a good deal of trade. Two of the houses are built of brick, and three are tiled. Next to Sultangunj in

size is Chichraun, a town of invalids, containing about 220 houses. The only other place that can be called a town is Kumurgunj, which may contain 100 houses.

The place of worship by far most frequented by the Hindus is the bank of the Ganges, immediately above the hill occupied by the mosque of Baiskaran, and opposite to a rock in the middle of the river occupied by a temple of the Gaibinath Priapus. Such places where the sacred river washes the rock are called Sila sanggam, or the union with stone, but that is not assigned as the reason for the peculiar holiness of the place. This is owing to the river in this part running from the south towards the north. Wherever this happens the river is no doubt reckoned peculiarly holy, and is called Uttarbahini. The actual reason of the preference given to such parts of the sacred river is, perhaps, that they are not common, as the general course of the river is towards the south, but in this district I usually find it attributed to a very different reason. It is commonly said, that at these places the god Siva took such liberties with the frail nymph of the river as might be expected from his indecent form. Of the three holy places called Uttarbahini in this district, this is by far the most frequented, and yet the circumstance of the river running towards the north is by no means well defined, while at the other two it is very remarkable. Farther it must be observed, that the Hindus have no native appellation for the place, but universally call it Sultangunj, a Persian, or rather an Arabic word. These circumstances induce me to suppose that the celebrity of the place has arisen from some old religion that has now become heretical, and which has been celebrated on the two adjacent rocks that are covered with figures in bas-relievo, totally unconnected with the religious places that are now in possession, one being sacred to Siva and the other to Muhammed. It is indeed said that Jahnu Muni of Gaur, who one day swallowed the Ganges, as I have mentioned in my account of Puraniya, had here a house (Asram); but this is a story rather apocryphal, and seems rather to relate to the personification of a natural change in the course of the river, than to any event in the course of human affairs. Whatever may be the cause, 18 families of Brahmans, containing perhaps 50 adult males, live by officiating as the priests (Pandas), who perform the ceremonies practised by

those that bathe. At the three usual full moons, from twenty to thirty thousand persons may in all attend to bathe, but the great emolument of the priests arises from about 50,000 pilgrims who at various times come to carry away a load of water which they intend to pour on the head of various celebrated images in distant parts. In the south of India I have met pilgrims carrying their load from this place, but by far the greater part goes to Devghar in Virbhūm, where it is poured on the Priapus or Lingga called Baidyanath, to whom this water, taken from a scene of former pleasure, is considered as peculiarly acceptable.

West from the thanah about four miles, at a place called Kumarpoor, is a Lingga called Siddhanath, which was endowed by a Kshetauri chief, whose name has fallen into oblivion. The land is enjoyed by a Dasnami Sannyasi, but the building is trifling, and the image attracts little notice, although a few assemble at the festival of the god. The only temple now of any note is that on the rock which is surrounded by the Ganges and is placed opposite to Sultangunj. This rock seeming to me connected with the principal antiquities of the place, I shall proceed to treat of them in common. A little west from Sultangunj is a square elevation called Karnagar, which exactly resembles that at Champanagar called by the same name, but is not so large. Some traces of the brick wall by which the outer side was faced are still observable, and it is said that a good deal remained pretty entire until it was pulled down by Colonel Hutchinson to erect a set of indigo works. There is no cavity within, the whole being filled with rubbish and bricks, and the dwelling house belonging to the indigo works is placed on a very fine situation in the centre. It is said in the vicinity that the monument of a Muhammedan saint was destroyed to make room for this house, but I look upon this as one of the pieces of scandal so commonly propagated by the people of this district to vilify the English character, as I have in general heard the natives speak of the gentleman in question with great respect. The size of Karnagar is not considerable. It appeared to me in riding over it to contain five or six acres, but the natives say that it contains about 25 bigahs, which is between 12 and 13 acres, and this may very likely be more accurate than my conjecture. The people whom I consulted considered the



**Karna Raja**, to whom this palace belonged, as the same with the **Karna Raja** who dwelt at **Champanagar** near **Bhagulpoor**, and the style of both the ruins is exactly the same. **Major Wilford**, however, considers these **Karnas** as perfectly different (*Asiatic Researches*, vol. 9, page 108), and in the table of the kings of **Magadha**, he makes the owner of the palace near **Sultangunj** or **Sri Karnadeva** to have reigned in the 3rd century of the Christian era, while he makes the **Karna** of **Champanagar** to have been contemporary with **Jarasandha**, first king of **Magadha**, in the 14th century before the 'birth of our Saviour. The former **Karna** he considers as king of all India, the latter as a petty chief of **Bhagulpoor**: yet, as I have said, the ruins attributed to the chief are much more extensive than these attributed to the monarch of India.

This **Karna**, the great king, according to **Major Wilford**, was an usurper, and confined his predecessor on the rock near his palace, that is surrounded by the **Ganges**, which I shall now proceed to describe. It is a very rugged mass of granite, separated from another hill of the same materials, now belonging to the **Muhammedan** saint by a branch of the **Ganges**, perhaps 400 yards wide. The summit is occupied by the temple of **Siva** called **Gaibinath**, surrounded by the buildings of a convent of **Dasnami Sannyasis**. These buildings are in good repair, and from their noble situation look well from a distance; but on a near approach I found them the most misshapen and rude mass that I have ever beheld. According to tradition **Harinath**, a very holy person, who had forsaken the pleasures of the world (**Sannyasi**), took up his abode on the rock. This person was at vast trouble in making pilgrimages to **Baidyanath**, until at length the God informed him in a dream that he would have no farther occasion to come so far, as on his return to the island he would find an image, to which he might address his prayers. This accordingly happened, and **Harinath** became the **Mahanta**, or head of a convent of **Sannyasis**, who took up their abode at the temple of the image, a **Priapus** called **Gaibinath**. This could not have been in a remote period, as **Digambar** the present **Mahanta** says that he is the thirteenth person who has enjoyed the dignity, to which no young man can hope to aspire. The place does not seem to have risen into great reputation until lately, as **Ananta** the last **Mahanta** is said to

have erected most of the buildings that now stand. Almost every person that comes to bathe at Sultangunj, on the three full moons, visits the temple of Gaibinath, carries up a pot of water, and pours it over the image. At the festival of the God a good many perform this ceremony, but in order to render it more efficacious, such as have strength of head and limbs, carry the water to the summit of the spire, and dash it from thence on the image. This however is a work to which many cannot pretend, as the spire is lofty, and the ascent to it is by ladders of a very tremendous appearance. The Mahanta acknowledges no Guru nor superior, and was born in the family of a Brahman of Kharakpoor; but he has given up all the insignia of the sacred order. He has about twenty disciples, and the community has five or six servants. In the rainy season they have little or no communication with the continent, the stream then rushing past with a violence that renders the approach dangerous; but a large proportion of the neighbouring Hindus in the fair weather receive instruction from the convent; while most of those who frequent Sultangunj to bathe at the three regular full moons, all in the fair season, all those who visit the temple at the festival of the God, and almost every Hindu of note who passes up or down the river in fair weather make offerings, which enable the Mahanta to lay up stores amply sufficient to supply the few wants of his disciples, who appear to be very poor creatures living in a state of listless mortification. The Mahanta fairly said, that the community was possessed of no knowledge but the art of begging, and that the utmost stretch of its science is to be able to read some forms of prayer which no one of them understands. They deny all knowledge of the state of their island previous to the arrival of their first Mahanta; yet it is evident that the place had previously been dedicated to religion. Below the buildings of the Sannyasis is a small temple dedicated to Parasnath, the 23rd teacher of the sect of the Jains. The Sannyasis say, that Baidyanath has given orders that the Jain should no longer worship on his sacred rock, which is as much as to say that they, as his servants, have put a stop to this heretical practice. Some Jains however, I am told, still come privately to the place. The temple of this sect, now standing, seems evidently to be a very modern work, the authority of the Sannyasis having

probably been unable until lately to expel the heretics. There are however on the rocks a great many figures in bas relievo, and some of them seem to be of very great antiquity, as being much worn, although carved on such durable materials. These carvings represent various personages received by all sects of Hindus as distinguished beings, among which I observed Parasuram, Narayan and Lakshmi, Ananta sleeping on a snake, with the goose of Brahma flying over him, Krishna and Radha, Narasingha, Ganes, Hanuman, and Siva; but I observed also a Jineswar, which I believe is never to be found in any place dedicated to the worship of the Hindus now reckoned orthodox.

**BATEMANGUNJ or HAVELI MUNGGER.**—This is a very small division, but remarkably well occupied, and containing a pretty large town. A little west from Sitakunda is a lake, which at all times retains a little water; but in the dry season does not look well, as its banks are dirty. In the rainy season it is a very fine object, as it is surrounded by hills, woods and rocks. The fort of Mungger itself is situated on a rocky eminence, and all towards the east and south the district, although finely cultivated, contains many rocks, in some parts rising into little hills, and, being finely planted, is perhaps one of the most beautiful parts in India. On the most considerable of the hills, in a grove, is the monument of a Muhammedan saint, and near it is the house of an European, that are great ornaments to the country, as is also the house of the commandant of the garrison, which is by far the handsomest building that I have seen in the course of my survey. The western part of the division is level, and rather too low to be well planted; but in spring it looks very rich, being then covered with one uninterrupted sheet of wheat and barley. The parts surrounded by the Ganges, and beyond it, are very low and bare, and in some places rather dismal, owing to disputes between the proprietors, which have prevented cultivation. Besides the houses of Europeans the natives have 210 dwellings of brick, which together with several ruins and the fort, add much to the ornament of the country. There are in the vicinity of the fort a good many small bridges of brick, made I believe by Europeans, and in good repair, and these, exclusive of the necessary storehouses

in the fort, some of which are good and very neat, are the only public buildings worth notice.

Mungger is a town of some note and great size, but as usual by no means populous in proportion to its dimensions. It consists of sixteen different markets scattered over a space about  $1\frac{1}{2}$  mile long from N. to S. and 1 mile wide. The only two parts in this extent that are close built, or resemble a town, are without the eastern and southern gates of the fort: at each is a street so wide as to admit carriages to pass, and closely built with a good many brick houses. Besides these market places, between the river and the northern gate of the fort is a suburb, which may be considered as the port, but it is chiefly built on the sands of the Ganges, and every year during the floods many of the houses must be removed. No enumeration of the inhabitants has been taken. The native officer of police thinks that in the whole there may be 7000 houses, but my native assistants are not willing to allow much more than a half of that number, or 3600 houses. Their opinion is founded on a careful inquiry from the people of each market; and although it is probable that the numbers may have designedly been underrated, yet they are, perhaps, nearer the truth than the native officer of police, who speaks merely by a random estimation. I do not think that by any means the population can be extended beyond 5000 houses. These, though very small when compared with the houses in European cities, are full of inhabitants; for six persons, I am told, may on an average be allowed for each. This would give a population of 30,000 persons, the whole charge of whose conduct, with that of a populous district, is entrusted to one man, who is allowed 25 rupees a month, and who, in his manners and education, is scarcely fit to be a gentleman's butler.

About four miles east from Mungger are five pools lined with brick. One, containing a fine spring of hot water, is called Sitakunda; the others contain a little dirty stagnant cold water, which seems to be entirely supplied by the rains, and are named the Kundas of Ram, Lakshman, Bharat, and Satrugan, after the husband of Sita, and his three brothers. No mention. it is said by the Pandit, is made of this place in the Ramayan of Balmiki; but the priests say, that an account

is given of it in the Kurma Puran, a part of the 18 alleged to have been written by Vyas. The legend as usual is curious enough, as showing the inconsistency of the Hindu stories. Ram, (Bacchus,) after having killed Ravan king of Langka, was haunted by the constant appearance of that prince, who, although a Rakshas or devil, was a very holy Brahman, and on account of his piety was served by the gods as his menial servants. Ram, in order to expiate the crime of such an atrocious act, was desired to travel as a penitent until he met all the gods and obtained a pardon. In order to procure this meeting he and his wife and brothers came to Kashtaharani, where they knew all the gods would be assembled to bathe. Here he obtained a remission of his sins, and he is said to have left the mark of his foot at the place. There is indeed a kind of representation of this impression on the rock, but it has been made so lately that the Pandits cannot allow this part of the story, which may probably be 20 or 30 years before it gains full credit.

On this occasion the gods seem to have been rather severe, as while they accepted of fruit from Ram and his brothers, they rejected the offering of Sita, alleging, that they suspected her having been unfaithful to her husband, when she had been in the power of Ravan. Previous to this the goddess, who was perfectly innocent, had allayed the jealousy of her husband by undergoing a fiery ordeal; yet the gods determined that she should undergo another before they would eat from her hand. This trial she suffered, where the hot spring now is, throwing herself into a pit filled with fire, and when she came pure from its flames, warm water flowed from the rock, as it continues to do at this day. The only authority for supposing that this legend is contained in the Purans is that of the Pandas or priests of the place; and that is, I confess, next to nothing. Since last year they have contrived to invent a miracle. They say, that during the last hot season, the water of the well having become so cool as to admit of bathing, the Governor sent orders to prohibit the practice, because it rendered the water so dirty that Europeans could not drink it. But on the very day when the bricklayers began to build a wall, in order to exclude the bathers, the water became so hot that no one could bear to touch it, so

that, the precaution being unnecessary, the work of the infidels was abandoned.

The officiating priests or Pandas are Maithila Brahmans, and amount to 100 houses; but the profits are divided into 60 shares, some of which are subdivided. None of them have studied the Sangskrita language, and the only sort of science that they possess is a knowledge of the legends respecting the place, and some forms of prayer, both acquired by rote. Most of the 30,000 people who bathe at Kashtaharani repair afterwards to Sitakunda, and worship there; and on the birth day of Ram about 1000 people assemble to celebrate the memory of that event. Besides vast numbers of travellers by land and by water and pilgrims resort to the place, so that the offerings are pretty considerable; but they are divided among so many, that in general the Brahmans of the place have only a scanty subsistence. They possess some land, for part of which it is commonly said there is no title. In the year 1803 I visited the place, and found the Brahmans very importunate beggars, and difficult to satisfy, as they rejected with scorn an offering of five rupees; but this year (1811) I found them very modest, and thankful for the same money. This, I am told by my native assistants, proceeds from their having known nothing about me when I visited them first, and from their being afraid when I saw them last of the result of my inquiries.

At Vikramchandi, near the town, is a hole in a rock sacred to Chandī, the Gramadevata of the place, and covered by a small building of brick. This goddess was courted by two of the most powerful sovereigns of India, Vikrama and Karna, who are here considered as having been contemporary. Karna, in order to procure the favour of this goddess, hit upon the happy expedient of tormenting himself by a daily immersion of his body in boiling butter; and by this means he every day procured  $1\frac{1}{4}$  *man* of gold, which he distributed to the poor. Vikrama, jealous of such favour shown to a neighbouring king, came in disguise, and entering the service of Karna, found out the manner in which his rival worshipped. He then determined to excel, which he accordingly did by slicing his skin in various places, and having offered his blood to the goddess, he gave himself exquisite

torment by filling the gashes with salt and spices, after all which he went into the bath of his rival. Such a gallant worship obtained the decided favour of the goddess, who has ever since been called Vikram-chandi. There is no image, but the priest (Panda) is a man of some learning, and makes a good deal of money, as he performs ceremonies for almost every pure Hindu in the town, and offerings are made at the temple every Tuesday and Saturday. The most common deity of the villagēs is Dubebhayharan. This is allowed to have been in Madhyades, or the central kingdom; but the people of the town will not acknowledge that it belonged to Jarasandha king of Magadha. In fact that kingdom has at different periods had very different extents, and this at one time may have belonged to it, while at others it was excluded. In the Mogul government, of course, it formed a part of Serkar Mungger in the province of Behar.

The place called by men Mungger, in the language of the gods is said by some to be called Mudgalpuri or Mudgalasram, from its having been the abode and property of Mudgal Muni, who lived long ago, and is said to have excluded Jarasandha, with whom of course he is supposed to have been contemporary. Others say, on the authority of the Haribangsa, that the town derives its name from a certain Mudgal Raja, one of the five sons of Viswamitra, son of Gadhi Raja, who received this part of his father's dominions; but, when he lived, or who he was, I have not learned. It must however be observed, that in an inscription seven or eight centuries old found at the place, and perhaps more ancient than the Haribangsa, the name is written Mudgagira, or the hill of Mudga, and not Mudgalpuri, or the abode of Mudgal. The existence of the saint and prince of that name is perhaps therefore problematical, as Mudga is the Sangskrita name for a kind of pulse, the *Phaseolus Mungo* of Linnæus, from whence also the vulgar name of the place is probably derived.

Major Wilford says, that Sagala is another ancient name for Mungger; but I do not know on what authority, and such of the Pandits, as well as vulgar of the place, as I have consulted, are totally ignorant of the name. The remain of antiquity, which according to tradition goes farthest back, is on a hill called Nauyagarhi, south-east about four miles from Mungger. It is said to have been the prison where Jara-

sandha king of Magadha had confined 80,000 of the princes of India, whom in pursuit of universal monarchy he had taken prisoners, and intended to sacrifice to the gods; but fortunately he was killed by Bhim, the brother of Yudhishtir, who afterwards contested the sovereignty of India with his kinsman Duryodhan.

Next to this I find celebrated in this division a Karna Raja, who, as I have said, is by the traditions here made contemporary with Vikrama sovereign of India, and who is here supposed to have attempted, but without success, to have seized on the power of that monarch. With respect to Vikrama such confusion prevails, as appears from Major Wilford's valuable treatise on the subject, in the 9th. volume of the Asiatick Researches, that no attention need be paid to any traditions concerning a person of such dubious existence. This very Karna is indeed one of the persons, who according to Major Wilford is styled Vikrama. Karna, as I have said, paid particular attention to the worship of the tutelar goddess of Mungger, and built a house on the hill now occupied by the elegant quarters of the Commandant, and in the time of Major Rennel's survey by a saluting battery. This hill is still called Karnachaura, and the house upon it was not intended for the residence of the prince, but for the distribution of alms. Two tanks near the hill, are considered as the work of the king and of his wife.

From the time of Karna, until that of Hoseyn king of Bengal, the people of Mungger think that their country was overwhelmed by forest. An inscription on copper indeed found in the fort mentions, that Raja Deva Pal, the third of that family, was encamped there with his victorious army, and had constructed a bridge of boats for a passage, while his elephants darkened the face of day, while the dust from the feet of the horses of the princes of the north spread darkness all round, and while so many princes of Jambudwip attended to pay their respects, that the earth sank beneath the weight of the feet of their attendants. This does not absolutely contradict the opinion of the natives concerning the deserted state of their country for many ages, much less does it support an inference which has been made, of the Pala Rajas having dwelt at Mungger. It would appear that the prince was then only passing with his army; and not-



ASIATIC SOCIETY



Figures on stone built into the north gate at Mangger.



Figures on stone in a bridge between Mangger & Tharua.  
b) The stone was recently removed & built into the north gate, Mangger.



Stone built in the wall of the Fort at Mangger.



withstanding his boasting, was perhaps returning from the Dinapoor district, where, as I have said in my account of that district, he continued to skulk until the retreat of the Moslems, who had invaded Patna his capital, and had overrun the western parts of his dominions.

Hoseyn Shah, the greatest of the kings of Bengal, extended his dominions on both sides of the river, as far at least as Mungger, and is said to have built the present fort, which, although not strong, has been a very magnificent structure. In the northern gateway, which is built of stone are many materials, that have evidently been taken from ruins, as the ornamented stones are built into the wall without any attention to symmetry, and these ruins have evidently been Hindu, as on a stone of hornblende in mass, which appears to have been the lintel of a door or window, there are figures in the human form, concerning which the men of Hindu lore are not agreed. One end of the stone is hid by the wall, but in the accompanying drawings, *Pl. 3, No. 1*, will be found a representation of what projects, which is the most elegant design of Hindu sculpture that I have yet seen. The execution is however less neat than the design, and the drawing therefore looks much better than the original. On the inside of this gate is also a figure carved on granite, and representing the human form (see *Plate 3, No. 2*). Although this is very rude, I refer it to the same period with the other, and attribute the difference in execution to the difference of materials; for so far as I have seen in their works, the natives of the north of India have never possessed means of cutting granite with any tolerable neatness.

Near a sally port, on the inside of the rampart, the fall of the plaster, by which the building was encrusted, has discovered two stones of almost exactly the same pattern with that at the water-gate, but smaller. These have probably been part of windows; and it is probable, that an accurate examination of the whole wall would discover many such. A very cursory view disclosed several in different parts of the wall, two of which are represented in *Plate 3, Nos. 3 and 4*. The former represents the five great gods of the orthodox Hindus with four nymphs. The latter in a foliage has a human head between two sheep, of which the Pandits give no

explanation. I do not think that the ruins, from whence these carved stones have been taken, can be referred to any other era with so much probability as to that of the Karna Rajas. The other gates of the fort have been covered with carving, but this evidently Moslem work, the carving consisting entirely of foliages, and every stone being suited by its ornaments to fit the place which it occupies with symmetry. The stone employed in these gates is very different from either of the former, and is a material of very small durability.

It is said, that Akbâr took Mungger after a severe battle in the vicinity; but so ignorant of history are the people here, that they imagine the prince who lost it, to have been Hoseyn Shah, who preceded Akbâr by at least a century. During the whole period of the Mogul government, Mungger continued to be a place of importance, and was the station of a series of officers of considerable rank; but I can learn no account of their names, nor characters. Shuja Shah, the great grandson of Akbur, probably when about to contest the empire of India with his brother Aurungzebe, is said to have repaired this fortress; and at the same time erected lines to the west of it, extending from the hills to the Ganges, and about three coss in length. The channel called Dakranala strengthened these lines towards the west; but the prince built over it a bridge, the largest which I have yet seen in the course of my survey, but very far from being a great work. It is now an irreparable ruin. The fort was again repaired by Kasem ali, who resided in it for a part of two years, while he was on very bad terms with the English. The accommodations in the fort, then occupied by Kasem ali as his public palace, would appear to have been very large; but the greater part has been pulled down, and the remainder so altered, for the purpose of suitably accommodating its present occupants, that no judgment can be formed of the style, in which it was built. The chief mosque, in the time of Major Rennell, seems to have been converted into a powder magazine; but as a building much fitter for that purpose has since been erected, the mosque has become the storehouse of an European trader. A private chapel superior to that at Rajmahal is still pretty entire; but has been deprived of some of the marble by which it was ornamented. The ladies of Kasem-

ali are said to have occupied buildings without the gate leading to Patna, which have been of considerable size; but are of very uncommon clumsiness, and are now ruins.

**SURYAGARHA.**—Is a beautiful and well occupied country. The southern parts contain, or are skirted by some low hills covered with wood, and are productive of rice, and well planted with mangoes. The western parts, towards the Ganges and Kiyul are finely planted with mangoes and palms; but are rather poor. The plantations are not ornamented with bamboos, but some are surrounded by Sisau trees, that add a very beautiful variety. This practice has also begun in some other parts, but is no where else so common. The eastern parts are low and bare of trees, being deeply inundated, but in spring are covered with one continued sheet of corn. There are two houses and one shop of brick; but the habitations are no ornament to the country, the misery of the villages being too much exposed to view; nor is there any public building worth notice.

The most common village deities are Chandi and Ratnamohan. But these petty gods are here eclipsed by Kshemkarni, who although she has only one place of worship, receives annually from 1,000 to 1,200 goats. The people whom I consulted, knew no older appellation for the country, than that of Serkar Mungger, in the province of Behar, established by the Moguls.

About five miles east from Suragarha is a monument, which like Asurgar in Puraniya, and the Karnagars near Champagnagar, and Sultangunj, is in the Hindu style, which I consider as of the greatest antiquity. It consists of a great heap containing bricks, and about 500 yards square. As there is no cavity within, it seems to have been rather a large palace or castle, than a fortified town. It is said, that, until a few years ago a ditch was very observable; but it has been filled up by an extraordinary inundation that happened nine or ten years ago. On the east side of the great elevation is a lower space, about 400 yards square, which contains many bricks; but the surface is very uneven, as if the buildings on it had been detached. East from this again are five or six old tanks, the spaces between which contain some small elevations and bricks. The tanks probably furnished the materials for the whole work, the country round being exceedingly low; and

the buildings now forming little heaps, were probably the abode of domestics. All the people whom I consulted, attributed this work to Parikshit, the second prince of the family of Pandu, which succeeded Jarasandha of Magadha in the sovereignty of India. This family however resided at Hastinapoor, far up the Ganges. Whether or not this be the ruin meant by Major Wilford, (As. Res. vol. 9, p. 109,) and said to have been the residence of a Karna king of Magadha, in the 12th or 13th century of the Christian era, I do not exactly know. It is the only Hindu ruin of any note between Mungger and Suryagarha of which I heard, and it is situated at no great distance to the north-west from the Dahara of the Bengal atlas, the marks by which Major Wilford distinguishes his ruin; but the Dahara of Major Rennell was called to me Dharbara, and could not therefore, I imagine, be the Dahara from which Karna the king of Magadha derived his name; nor have I seen any ruin attributed to such a person.

It is said, that at Abgel, between two and three miles below Suryagarha, there was a Moslem city of considerable size; but the river has there for some years, been making great encroachments, and I could see no remains of buildings on its banks, except a ruinous mosque of brick, and that of an insignificant size. During the former encroachments of the river it is however said, that every year the foundations of large buildings were exposed to view. In this division there have been several small forts belonging partly to turbulent chiefs, and partly to the officers of the Mogul government, employed to keep the others in awe. The whole has become totally ruinous, being fortunately no longer of use.

**MALLEPOOR.**—This division, where it is properly occupied, is very beautiful, being rich land finely diversified by hills and woods, and the cultivated parts are ornamented with numerous groves of the mango and a few palms, but no bamboos. Besides many scattered hills, there are three very remarkable groups. The largest towards the north, is an uninterrupted chain, which extends east from the banks of the Kiyul, and after running through the northern parts of this district for a long way, turns suddenly to the north, and forms the boundary between this and Tarapoor. Adjacent to the south of this ridge, and separated only by narrow rugged defiles, is an extensive mass of a very irregular form, and

surrounded by a cluster of smaller hills. Each of these has a distinct name; but I could procure no general name either for the whole collection of hills, for the long ridge, or for the large irregular mass; each peak of these however has a name, or rather various names. The next great range is that which overhangs the old castle of Gidhaur, and extends west from thence to a great distance. The third great collection of hills is in the south-east corner of the division. It consists entirely of detached peaks, each having an appropriate name. One of them is called Ganda, which Major Rennell has extended to the whole mass; but, so far as I can learn, this is not in imitation of the natives. All the hills are covered with woods or bamboo growing spontaneously, of which there is a vast quantity; and the woods extend over a great proportion of the level country. In some remote parts the trees and bamboos are of a tolerable size; but in common, if compared with the forests of Nepal, Kamrup, Chatigang or Malabar, they are diminutive. The houses, as usual in the western parts of this district, are no ornament to the country; on the contrary their meanness is very disgusting, nor are they hid as in the eastern parts of Bengal, by hedges or trees. The Zemindars of Gidhaur, although a very powerful family, do not dwell in brick houses; but they have an office for collecting their rents built of that material, as a safety for their papers, and five shops are also built of the same. There is no public work that is any sort of ornament. Mallepoor, the residence of the Darogah and Commissioner, contains about 300 houses, finely situated on the banks of the Angjana river, and not on the Kiyul as represented in the Bengal atlas. Jamuyi contains about 150 houses, among which are the six buildings of brick above-mentioned. Sogo contains about 200 houses. No other place can be called a town. The most ancient monument of antiquity is on a hill near the Thanah, where the ruin of some buildings, said to have been erected by the god Ram are shown; but the hill forms a part of the Ramgar district.

Next in antiquity to these, in the opinion of the natives, is the ruin of a town called Indappe, situated a few miles east from the old castle of Gidhaur. I have already mentioned all that I could learn concerning Indradyumna or Indradawan, the founder. The work is pretty extensive, the fort being a square of about 1,650 feet. The rampart of brick has been

about 10 feet thick, and the ditch about 15 feet wide, so that neither could have been intended for any serious resistance to an army; but they were sufficient to guard against surprise or insurrection. The east face is rather irregular, being bent in south from the gate, which is not exactly in the middle, as is also the case with the western gate. In the northern and southern faces are no gates. Before the eastern gate are two heaps of brick, that have been considerable buildings. Within the outer fort has been a citadel. To the left of the passage between the outer gate and that of the citadel, entering from the east, are two considerable heaps of brick; that nearest is said to have been a temple of Siva, and a priapus still remains. On the right towards the north-east corner of the outer fort, are three very considerable heaps, surrounding four smaller. Towards the south-west corner of the inner fort, on its south side, is another heap; and these are the only traces of buildings in the outer fort. On entering the citadel from the east, you have on the left a mound, which, from its great height is by far the most conspicuous part of the whole building. It is said to have been a place (Chandini), to which the Raja repaired to enjoy the freshness of the evening air; and this tradition is confirmed by the remains of a small terrace of brick, as usual in such places, that has been built on the top of the mound. The mound is however so very great a member of the whole, that I rather suspect it to have been a solid temple of a Buddha; as we know that the Rajas of this part of the country, immediately previous to the Muhammedan invasion, were of that sect. Beyond the mound is the royal palace, as it is called, raised on a lofty terrace 220 feet long by 110 wide. Traces remain to show that this terrace has been occupied by three apartments, where probably the Raja sat in state, while his family was lodged in wooden buildings, that have left no trace. The brick buildings in the outer fort, and without the eastern gate, where probably public offices, and the officers and domestics of the family were perhaps accommodated in buildings of no durability sufficient to leave traces that are now observable. A Brahman, who was cook to Indradymna, is said to have had a house at Jamuyi, where some heaps of bricks are shown as its remains



The old castle of Gidhaur is a considerable work. The most common account of it is, that it was built by Sher Shah, who expelled Homayun, and became emperor of India; but many allege, that the founder is totally unknown; and others again allege that it was built by a Hindu officer, who was agent for the king that expelled Indradyumna, and who governed the country for some time, after which the garrison was withdrawn, and the country for many years continued a forest, inhabited by small bands of robbers, who made predatory incursions into the cultivated country towards the Ganges. A description of the ruin may serve to throw some light on the subject. The fort, or rather castle, consists of a square wall, built rudely of uncut stones, taken from the adjacent mountain, and very injudiciously disposed. The stones, by which the walls are faced, are tolerably large; but in place of being built with their ends alone exposed, the greatest extent of smooth surface has been exposed to view, and the interstice between the two faces has been filled up by loose stones, thrown in without the trouble of building, on which account the wall does not possess strength in proportion to its great thickness. The walls, at the middle and angles, are 23 or 24 feet thick at the bottom, and about 17 feet at the top; but in the middle, between the gate, in the centre of each face, and the angles, the wall is narrower by seven feet, owing to stairs being taken from its thickness. The walls seem to have been about 30 feet high, besides the parapet, which has been only intended for the use of small missile weapons, and not for cannon. The projecting works are not higher than the curtains, and there has been no ditch, nor is there the smallest trace of any building for the accommodation of the garrison, which must have been huddled in the area of the castle. At each side of each gateway, in the thickness of the wall, is an arched recess for the security of the guards. The northern and principal gate has been defended by an outwork, but this was probably a more modern work, as it never appears to have been strong, and, having been hastily erected, has fallen to the ground. The curtain between that gate and the N.W. angle has evidently fallen, and has been rebuilt very rudely and hastily, as no flanking projection has been added. A hasty attempt has been also made to strengthen the other gates, by straitening

the passages; and this has been effected by placing, at each side, a column of stone, evidently taken from some more finished ruin, as the column is cut into regular form, and is of a different nature from the rock of the adjacent mountain, with which all the original parts of the castle have been built. The columns are connected by the fragments of others, laid across their tops, and not by a stone cut in the shape of a lintel, as would undoubtedly have been the case, had they been cut on purpose for their present situation. Besides, the pillars are not at all connected with the walls, which they undoubtedly would have been, had they made a part of the original fabric. Three of the gates retain the name of the elephant, horse, and camel; but that towards the east is called the gate of the great God (Mahadeva), and an image is placed at one side of the entrance. This, I have no doubt, shows the castle to have been a Hindu work; nor did the early Moslem kings, so far as I recollect, employ Hindus in commands of trust. I think it most probable, therefore, while Indappe was the usual residence of Indradyumna, that the castle of Gidhaur was his principal stronghold, by which he secured a communication with the fastnesses of the mountains. It is very likely that Sher Shah, in his war with Homyun, he advancing from Behar, and his antagonist from Gaur, may have occupied the castle, repaired it, and taken some of the materials from the more elegant ruins of Indappe.

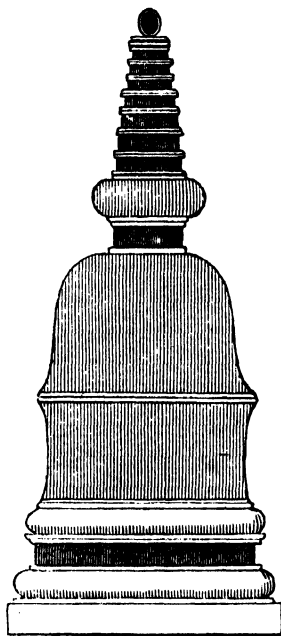
TARAPOOR.—The northern parts of this division are of the same dismal appearance with the interior of Kumurgunj, on which they border, and which have been already described. South from thence is a very beautiful level country, well occupied, and finely planted with mangoes and many palms. It contains a few scattered rocks, that add to its beauty; but is in general low, and well supplied with water, which can be raised by machinery from canals or wells, the water in many places being found a few feet below the surface. The western parts are hilly, composed chiefly of portions detached from the great mass, described in the northern parts of the east division. Among these hills there are many fine valleys, but in general much neglected, both being overgrown with woods of small trees and bamboos. Two other clusters of hills are remarkable. One towards the east is on the

boundary of Ratnagunj and Bangka, and consists of detached hills, each of which has a peculiar name ; but the cluster has no common appellation that I could learn. The country to the south of this, and east of the first mentioned cluster of hills, is of the fine nature that I have before described, near the hills being mostly fitted for winter rice, and far from them being fitted for various other crops ; but towards the hills are some extensive woods. In the south end of the district is part of the cluster that I have described as belonging to the S.E. corner of Mallepoor. Between these three clusters is a large space, covered with forests, through which it would have been difficult to pass. In this the people are very thinly scattered.

The houses, as usual in the western parts, are very mean. Even that of the Raja of Kharakpoor, although it contains some small portions of brick, is but a very sorry place. Near it, however, he has a very handsome mosque, overhanging the Man in a fine situation, while he is erecting opposite a building that promises to be ornamental, and is intended to celebrate the memory of the grandsons of the prophet. The vicinity is ornamented by the ruins of a house that belonged to his grandfather, and that went to ruin during the insurrection, which he raised against the last remnants of the mogul force. It has been a very large building, and looks more like an old European castle than any thing that I have seen in the course of this survey. The dewan of the raja has also a brick house, the only other one in the division. Among the forests of the interior of this district (Janggaltari) the houses make a still worse appearance than in the open country ; not that the huts are much worse, that being scarcely practicable ; but the extreme jealousy of the men, in order to conceal their women, has erected a thick fence of the withered branches of trees, that make the most dismal appearance possible, and entirely conceal the huts, which in most other places are rendered somewhat more agreeable to the eye, by being covered with gourds, pumpkins, or a climbing bean. There is no public building of the least note. Tarapoor, where the native officer of police resides, contains two market-places, Bazar Gazipoor, and Hat Tarapoor, with about 200 houses very much scattered. Arjusgunj, the residence of the Commis-

sioner, has more the appearance of a town, and contains about 500 houses, with a neat small mosque in good repair. Kharakpoor, the residence of the owner of the whole division, and of other vast estates, contains about 250 houses. Belwari and Mozuffurgunj, two market places, have each rather more than 100 houses. South from Tarapoor is a very picturesque rock of granite, at a village called Madhusudanpoor or Devghara. On its summit is a small temple, to which none of my Hindus would venture to ascend; although they were very desirous, and although a Moslem laskar showed them an example; but the precipice is tremendous, and the ladders were very bad. It contains no image; but it is said, that formerly it contained one of Narayan. Why this should have been removed, cannot now be ascertained. Lower down the hill is a representation of the human feet, like those on the Jain Temple, near Bhagulpoor, and which, like those, the vulgar call Vishnu Paduka; but they are dirty, and are neglected even by the sect of Vishnu. These may perhaps account for the temple on the hill being deprived of its image.

Gauripahar is a most romantic rock, some miles east from the lofty Lord, and there are at the place two ruinous temples, one of Siva, and the other of his wife. On a rock near these temples are carved some rude figures representing the solid temples, used in the worship of the Buddhists; but I could trace no tradition respecting the persons by whom they were made. One of them is represented on the opposite page. Near it, on the rock, is carved in a modern Hindu character the name Daniyali Saha Daska Sertaz; but the Kanungoe pretends that this was done by the son of a Moslem King, to signify that he was protector of the Kanungoes ancestor. The oldest ruins are attributed to the Kshetauris, who possessed the country before they were expelled by the Rajputs, ancestors of the present Muhammedan family. I shall afterwards have occasion to mention the foul deed more fully, and it would be unnecessary to enumerate the small ruins left by the petty chiefs of the Kshetauris, who were very numerous; but all appear to have lived in brick houses, and to have been somewhat more civilized than the barbarians by whom they were expelled; and they do not appear to have been so turbulent, as round their houses I perceive no traces of for-



tifications; whereas after their expulsion, the country was filled with small mud forts, erected chiefly by the Rajputs, but some also by the officers of the Muhammedan government. The ancestors of the Rajas in particular fortified every pass in the mountains, and whenever they were on bad terms with the government, retired into the narrow valleys among the hills, where they could not be followed by the Mogul horsemen. These works are quite ruinous; and except to destroy them, as nests harbouring banditti, never deserved notice. Having promised so much, I shall here confine myself to describe the works at Kherahi Hill, in the north-east part of the division, attributed to Sasangka Raja, the last chief of the Kshetauris.

At the end of the small ridge named Kherahi, extending nearly north and south, and not east and west as represented in the Bengal atlas, and towards a small detached peak called Nari, is a very considerable space, in which the ruins of houses, built with brick, may be traced, and in this are several small tanks, as usual in Indian towns. From a small market, situated at the north end of the hill, I ascended gradually up its eastern face, by a road formed of flags cut

from the mountain, but very rude. Where the ascent is steep, these flags form a kind of stair; where the declivity is gentle, they form a pavement. Having reached the top of the ridge, the road divides into two. One branch goes south to the second stage of the hill, the other runs north, along the first stage, to its end, which overlooks the market-place. I proceeded first to this, passing on both sides many scattered bricks, where there probably have been many small temples. On the west side of the road I found a flag, on which was cut the characters delineated in the drawing No. 8. No one, that I have been able to find, can tell what character it is; but it has a strong resemblance to the Pali of Ava, which Major Wilford, with great reason, thinks the same with the old character of Magadha, from which country Gautam, the lawgiver of Ava, undoubtedly came. On the end of the hill, commanding a most noble view of the Ganges, are the foundations of a small brick chamber, near which is a flag, on which is carved a mark of the form placed under the characters (see *Plate 4*, No. 3.) This chamber was pointed out by the villagers as the place in which the Raja was wont to enjoy a cool air, but this seems doubtful. Having returned to the other branch of the road, I for a little way ascended the second stage of the hill, when I turned to the left to see a very fine circular well (Indara), which had been lined with brick, and had been at least 16 feet in diameter. A wild fig tree has been allowed to take root, and to throw down the wall, so as entirely to choke the well, which in all probability was very deep. Returning again to the road, and ascending the second stage of the hill, 30 or 40 yards, I came to an image of Priapus, more resembling the object it is intended to represent, than any attempt of the kind that I have seen in India. Immediately above this is a large heap of brick, which is commonly called the Raja's house; but appears evidently to have been a temple, for its size is not suitable for a dwelling, and the steepness of the hill would have rendered it exceedingly inconvenient, except as a place of strength, and there is not the smallest appearance of fortification. This heap consists of two parts, one between the summit of the hill and the priapus, and one on the summit. The walls of the former seem in some measure to remain, but the roof has fallen in, leaving an irregular mass of bricks with a cavity in the centre. Near the priapus a pillar of granite

projects from the brick three or four feet; we may form a judgment of the reliance that is due to the reports of the poor neighbours by their supposing that the Raja's elephant was secured by tying him to this pillar. The building on the summit has been immediately adjacent to the other, and some of its foundations, constructed of cut granite, still remain. The walls have been thrown down the hill, where many masses of granite may be seen; and among them parts of doors and windows rudely carved. A Ganes is very distinguishable, and there are other idolatrous figures; but so much defaced, that the particular objects which they represented are not recognizable. This building has been between 20 and 30 feet square. In the hollow between this second and the third and highest summit of the ridge have been several small buildings; and on the third summit, overlooking the lower and southern end of the ridge, has been a small chamber of brick, about nine feet square, with one door towards the N.E., and no window. This the people call the queen's apartment; but we cannot suppose, that even a Hindu lady could endure to be squeezed into such a hovel. It looks more like the den of a hermit. On the whole, I am persuaded that the buildings on the hill have been dedicated to religion, while the Raja dwelt below; and from the appearance of the inscription, in particular, I think it probable that the religious buildings on the hill are of great antiquity, probably coeval with Jarasandha, when the Pali was the learned language of Magadha.

BANGKA is a most beautiful territory, there being scattered through it a great number of small detached hills and rocks, finely wooded. The plains or swelling grounds by which they are surrounded are by nature very rich, but have been most miserably neglected, owing partly to the turbulence of former times, which introduced habits not yet overcome, and partly to an indulgence shown to the Zemindars, by whom it has been grossly abused. Near the Chandan river and a few other large streams, however, there is much most beautiful cultivation, with fine plantations of mango trees and a few palms, and in the northern corner a few bamboos. The forests of the west resemble those of Tarapoor, consisting chiefly of a variety of small trees and bamboos, with many Mowal trees near the scattered villages; but towards the east the woods, where not cut, are more stately, contain no

bamboos, and consist chiefly of Sakuya and Asan, both of which, however, are in many places stunted, by extracting rosin or feeding Tasar. Except towards the N. E. the Mowal is there also very common. In the whole division there is no dwelling house of brick nor any public building that is an ornament to the country, or the least relief from the uniform misery of the huts. In the woods these are however hid from view, as in the last division, by still more ugly fences of withered branches and leaves.

Bangka is a poor little town, which may contain 120 houses. Subalpoor and Jaypoor contain each about 200 houses, and Chandan about 100 houses. The Moslems have no place of worship at all considerable. That most attended by the Hindus is Madhusudan, a very modern work, and which seems to have derived its celebrity entirely from a neighbouring hill named Mandar. I visited Madhusudan, concerning which I had heard much, and it was by mere accident that in passing I saw some of the ruins that are near the hill; nor did I discover that it contained anything interesting until I was too far removed to be able to visit it. I was therefore under the necessity of contenting myself with sending an intelligent person, who brought me a fac-simile of an old inscription, and some account of the place. Mandar hill is an immense detached rock of granite, like those on which the hill forts of the south of India have been erected. There is said to be a book called the Mandar Mahatma, which gives an account of the place. Some people told me that it is a portion of the Skandha Puran, but such assertions I know are of very little value; and a Brahman, who said that he had a copy, told me that it was first delivered orally by Kartik to Siva, who again related the contents to Raja Parikshit, who repeated it to Kapil Muni, who published it in writing. The Brahman took the price of transcribing the book, but has not favoured me with the copy. This is perhaps no great loss, as the legend is probably so monstrous as to afford little insight. The oldest buildings are said to have been erected by Raja Chhatra Sen of the Chol tribe, who lived before the time of the Muhammedans; and the Chols were expelled by the Nat, who in their turn gave way to the Kshetauris, who fled before the Rajputs that now possess the country. Inscriptions attributed to the Chol are engraved on the rock at



two different parts, but the inscription at both would seem to be the same. That in the two lines (Plate 4, No. 4) is lowest down, and its letters are about seven inches long. The higher (Plate 4, No. 5) is written in four lines, the letters of which are about an inch and a half long. None of the buildings on the hill are near these inscriptions; but at some little distance from the upper is said to be a very rude outline of the human face, which the people call Madhu Kaitabh; and say, that Madhu and Kaitabh were two Asurs or infidels, who were killed by Vishnu before that god was incarnate. Some way above this is a small temple of Siva. On the summit of the hill are two small temples. One contains six representations of the human feet exactly like those in the Jain temple at Champanagar. The people say that two represent the feet of Vishnu, two those of Saraswati, and two those of Lakshmi. In the other temple was formerly the image of Vishnu, under the title of the destroyer of Madhu (Madhusudan); but it is now empty. Chhatrapati Ray Zemindar of Mandar, as I am informed by his successor in the seventh generation, removed the image to a small brick temple (Dalan) now in ruins, and placed at the foot of the hill. Near this he built a Math, to which the image is carried on the festival, and which, according to an inscription, he erected in the year of Sak, 1521 (A. D. 1589.) Near this also Antikanath, a Sannyasi, took up his abode, and died. His pupil, Achintagiri, built a house entirely of cut stone, which is still occupied by his successors, and is the rudest building of this material that I have ever seen. It is said to have been built about 150 years ago. The image of Madhusudan is supposed to have been made by Ramchandra, one of the incarnations of the god, which it represents. It remained some time at the temple built by the Rajputs, when Rudramohan Das, a clerk in the office of the provincial Kanungoe, removed it to a small building about two miles distant, which has been greatly enlarged by Rupnarayan Deo, a considerable Zemindar now alive. It is an exceedingly rude work, although of considerable size; and the priests, who are numerous, are most importunate beggars.

The two temples on the top of the hill, a stair leading up to them, the inscriptions and some rude carvings on the rock are attributed to the Chol Raja. Among these carvings is said to be a personification of the Kaliyug or degenerate age,

at which the people assembled on the holy day were wont to throw dirt ; but the practice was prohibited by a late magistrate, and the people had the good sense and moderation to take no offence. Besides these remains on the hill, ruins are scattered about its foot for above two miles in extent, and are attributed to the Chol Raja. I saw them in passing by mere accident. Between the present temple of Madhusudan and Mandar hill I saw a great many stones and fragments of pillars carved in a very rude manner, but which must evidently have formed a very large building. A small tank at the foot of the rock is called Manoharkunda. On its east side is a stair built of stones, evidently taken from ruins ; and near the stair is lying a stone, on which is very rudely carved in relieve the figure of a female deity called Papaharani, or destroyer of sin. It has been very much mutilated, but communicates her name to the tank, which is more usually called Papaharani than Manohar. The scattered stones and bricks of ruins extend a considerable way from Papaharani beyond the buildings erected by Chhatrapati to a pretty considerable tank. Near this has been a temple, which has quite fallen ; but the object of worship called Jagatma or Jagadamba, (the mother of the world,) still remains. It is a large flat stone, on which have been carved many figures. The chief has been so much mutilated that I cannot say what it represented, but it probably has had somewhat the form of a woman. West from the temple of Jagatma, very near it, and evidently dependent, has been another smaller one, still pretty entire. In this is the image of a quadruped, with its fore parts turned towards Jagatma. It is said to have represented a cow ; but it is so much mutilated and so rudely carved that I think no one can possibly say what animal may have been intended. It is called Kamdhenu. Madhusudan is a place of pilgrimage, to which about 10,000 people assemble on the last day of the solar month Paush (Tiluya Sangkranti), and continue performing their devotions for three days. I suspect much that in this place the worship of Madhusudan has been of no long standing, as I am told that the chief object of the multitude is to bathe in the pools on the hill, especially in Manohar, and to worship Papaharani. So strongly inclined to the marvellous are the people here, that they imagine that there is a stone stair at each side of this tank, and that it contains 11 bigahs

of land. This is at least double the size; and, if the ghats exist in the eye of faith, I may safely assert, that they are invisible to the eyes of the infidel. The people also imagine, that the water of Akasganga, a pool on the hill, is hot; but I am assured by the messenger whom I sent, a descendent of the god Siva, that the heat is not perceptible to the senses. The priests of Madhusudan are Mithila Brahmans, and the modern inscriptions on the works of Chhatrapati are in the Mithila character.

FAYEZULLAHGUNJ is a jurisdiction of moderate size. Were it in a decent state of cultivation, it is a very beautiful country; but, owing to the neglect of the proprietors, it has in many parts a most dismal appearance. The northern extremity is low land flooded by the river, most beautifully cultivated, and adorned at each end by little hills. Within that is a fine swelling tract, in some parts rather poor, in others of most extraordinary fertility; but almost everywhere very much neglected, especially towards the east, where it is naturally most fertile. Here remain many fine old plantations, but there are vast wastes overgrown with stunted trees or bushes thinly scattered among coarse grass. Towards the S. E. is a low tract called Manihari of very rich land, surrounded by hills, and finely watered, which would have been one of the finest estates that I have ever seen had decent attention been paid to its management. It contains many scattered stunted trees, but the wastes are mostly covered with coarse grass.

Some houses built by Europeans are an ornament to the country, although partly ruinous, partly devoid of architectural merit; but the natives have erected no dwelling of brick, and there are some Troglodytes, who still live in caves. There are two or three miserable brick bridges, but no public work in any degree ornamental. Kahalgang is for this country a good small town, containing about 400 houses rather regularly and neatly built. The only other place that can be called a town is Gajarajgunj, which contains rather more than 100 huts.

Although the Ganges runs almost due north from Kahalgang to Patharghat for about eight or nine miles, and although it not only washes, but surrounds the rocks of the Vindhyan mountains, this place, which on both accounts ought to be

peculiarly holy, is totally neglected, and no assembly takes place to bathe. On the contrary, the people all flock to the opposite side, where the river runs south, and the whole country is a dead level. Both Moslems and Hindus have indeed attempted to take advantage of the rocks, that are now surrounded by the river; and, since they have been separated from the continent, a Fakir has erected the monument of a saint on one, and a Sannyasi has found an image of Priapus on another; but both seem silly fellows. They only go occasionally to these places, and have not resolution or resources to pass the rainy season on the spot; and they have made no progress in bringing their rocks into a source of revenue.

At Patharghat, just where the river turns round to the east, a rock of granite projects into the channel, and has carved on it some figures of gods; but like those on the rocks of Sultangunj they are no longer objects of worship. They are exceedingly rude, and much defaced by time, so that in general the deities, which they have been intended to represent, can no longer be recognised. One of them seems to be Krishna and Radha. On the face of the hill east from thence, and facing the river, is a rock called Chaurasimurtisthan, or the place of 84 images. These are carvings, in very high relief, representing the adventures of Krishna and Ram. The figures are between two and three feet high. There is no tradition concerning these images, nor is any worship paid to them, and the same is the case with 50 or 60 images of all sorts lying scattered about the temple of Bateswarnath, which now attract the whole attention of the pious, and has superseded some old place of worship.

The image of Bateswarnath, until lately was poorly accommodated; but the Dewan of the Collector has lately rebuilt and enlarged the temple. The image is supposed to have been there for many ages, and came to the place without human assistance. The priests denied any endowment, but I find, that they have 25 bigahs, with another priapus (Bushmanath), and a temple of Bhairav on the same hill, and a temple in Kodwar, of which I have given an account. The family has divided into eight houses, each of which officiates for a day in rotation, and takes all the offerings that are made, while they officiate. Almost every passenger of pure birth

stops to make offerings, so that each day produces somewhat. About 1000 people assemble to worship at the full moon of Magh, and 500 at the Sivaratri.

At Kahalgang is an old mud fort, the history of which was totally unknown to those whom I consulted.

PAINGTI.—There are a few scattered hills, and those of the northern tribe of mountaineers bound most of the territory on the south, and would render the scenery very fine, were the land between them and the river occupied and planted; but it is almost totally neglected, and has an exceedingly dismal appearance, being chiefly covered with coarse withered grass and stunted trees. The islands and low banks of the river, except the town of Paingti situated on the face of a little hill, are almost the only places, in which there is a house; and these, as usual, are very bare, while their cultivation is less attended to than common; so that I have no where seen such a wretched jurisdiction. There is no dwelling of brick, nor any public building, that can in any degree be considered as an ornament.

Paingti containing about 140 house, and Ganggaprasad containing about 100, are the only places that can be called towns. The former is rather a neat thriving place, the latter seems to be chiefly occupied by impudent and querulous beggars, who live by fleecing passengers, while they carry on their plan by complaining of being plundered.

The principal place of worship among the Moslems is the monument of Pir Saiud Shah Kumal, a saint, who, on his arrival at the Paingti, found the place preoccupied by a Pagan Raja of the Nat tribe, who passed a life of great austerity in a cave, that overhangs the river and communicates with sundry subterraneous passages. It being impossible for two such persons to live in the same place, the saints fought, and the Pagan was slain. The Moslem then lived undisturbed at Paingti, and, when he died, was buried on the hill above the cave of his former adversary. When he had been 10 years dead, Bundugi Shah Iyusuf, at Mudinah in Arabia, had a dream, desiring him to go to Paingti, and build a monument to the saint, a school, and mosque, which he accordingly did. The present keeper (Khadem) boasts of being the descendant of the Arab, and enjoys an endowment of 517 bigahs of land, which was probably intended, in part at least, to support the

school; but that is entirely neglected. The monument on the top of the hill consists of the graves of the saint, of his son, of his horse, and of a tiger, covered with brick and plaster, and surrounded by a brick wall, all in good repair. The keeper says, that over the gate there was an inscription, which, about 10 years ago, an European took away by force. The infidel had scarcely removed the stone into his boat, when a storm arose, and would have sunk him, had not he thrown the stone overboard.

The mosque is at the bottom of the hill, on the right as you ascend, and has been a decent building, although of no great size. Some additions were made to it by Captain Brooke, while he was acting against the mountaineers, and it was converted into a barrack for his seapoys. The Moslems have had the good sense to despise the pollution, and continue to worship God, as if an infidel had never entered the temple.

The mudursah or school was built over against the mosque on the left of the ascent. It has consisted of three chambers behind, with an open and wide gallery in front, extending the whole length of the three chambers. These served for the accommodation of the Moulavi, who taught, and through the day the pupils sat in the gallery to receive instruction. The roof has fallen. This school is built over the mouth of a subterraneous gallery (Sujjah), that is said to have led to the cave overhanging the river, in which the Hindu saint lived; but the passage has been walled up, a rude chamber under the school having been converted into a powder magazine, when the troops occupied the mosque. This chamber is now inhabited by a Muhammedan hermit, one of the most wretched animals, that I have seen. There is no great assembly at this monument; but both Hindus and Moslems, residents and passengers, make offerings, the place being considered as very holy. Sakaragar is an old fort, about four miles west from Sakarigali in the portion of this division, that is surrounded by Rajmahal. It is said to have been built by a Nat Raja, proprietor of the vicinity, and to be named after his wife Sakara. It contains some brick walls surrounded by a ditch, so wide and deep; that it is called a tank (Talab), and is so clear, that the work is probably not very ancient.

At Teliyagarhi, where the hills descend close to the river,

and form the boundary between the Mogul provinces of Bengal and Behar, Sultan Shuja built a fortress, which has been a considerable work, the two extreme gates being about a mile, road distance, from each other. The gates are built partly of stone, the houses within are entirely of brick. At the western gate is lying on the ground an iron cannon of extreme rudeness.

RAJMAHAL is a long narrow strip, extending 40 miles from north to south, and for the whole of that length borders on the northern tribe of mountaineers. The country, at a little distance from the Ganges, in general rises into little swells, and in some places into small hills, and would admit of fine plantations; but there is a great deal of land near the marshes subject to inundation from the river, which under present circumstances is bare. As, however, this is a good deal intermixed with higher lands, and is extremely fertile, the whole district might be made most beautiful, as the hills of the mountaineers are everywhere in full view to diversify the scene, and the lakes add a beauty, that is uncommon in India. In its present neglected state, however, a great part of the division is extremely dismal, especially between Udhwanala and Rajmahal, and between Musaha and Sakarigali, where it is covered with long harsh grass. There are however many plantations of mangoes and palms, with a few bamboos. The woods are all stunted. The residence of a prince of the house of Timur, and of sundry other personages of very high importance, has left behind many buildings, that would have been highly ornamental; had they not in general fallen into ruin; and the 220 dwellings of brick, that still remain, are in general so slovenly as to impress the mind with little less regret than even the common huts of the peasantry. There are two bridges of brick: one at Udhwanala, said to have been built by Kasem Ali, and another towards Pirpahar. They are both small, and exceedingly rude; and, although still of use, are fast hastening to ruin.

Major Wilford seems to have been able to find some authority, for considering Rajmahal as a place of note in great antiquity, and says, (*Asiatick Researches*, vol. 9, page 34) that Balaram, the brother of Krishna, after his wars with Banasur, whose residence is still shown near Puraniya, (Purneah) built Rajagriha or Rajamahar, on the banks of the

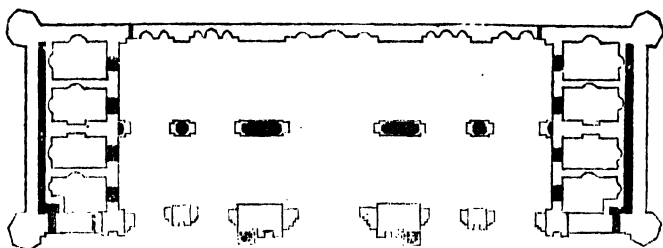
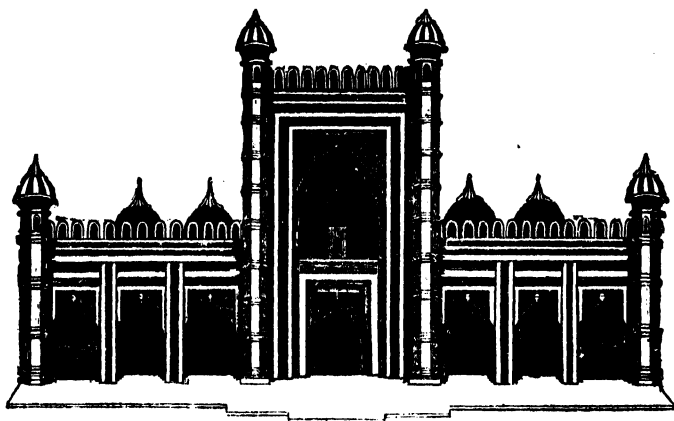
Ganges, which must not be confounded with Patna, the Rajagriha of Jarasandha. I presume, therefore, that Major Wilford means our Rajmahal, which in fact is at no great distance from the city of Banasur, that I have described in my account of Dinajpore; and near Puraniya I have not been able to trace any work attributed to that hero. The Pandits, whom I consulted allege, that Balaram never was a Raja, and as a descendant of Jadu could not pretend to that distinction, and the inhabitants universally attribute the name of Rajmahal to a very modern period. They say, that Man Singha, when sent by Akbur to settle the affairs of Bengal, selected this as a situation for building a house; and he had begun to build one, the ruins of which are still shown, and had begun to erect a temple, when Futehjung Khan, who had the management of the neighbouring country, wrote to the King, that Man Singha was erecting a palace, which all the Hindus called Rajmahal; that although an officer of the king, he was profaning the town by building a palace of idolatrous worship, and was evidently meditating insurrection. Man Singha had timely information of this letter; and knowing his danger, immediately issued an order, that the new town should be called Akburnagar, and that the temple should be changed into the great place of assembly for the faithful, and called Jomma Musjed. The king receiving intelligence of the Hindu's loyalty, at the same time with the complaints of Futehjung, considered them as malicious. The Hindu and Moslem chiefs lived afterwards on very bad terms, and at length their followers came to blows, and a battle ensuing the Moslem was killed. There is no doubt, that Akburnagar is the name, by which this town is called among the Moslems; but as usual the Hindu title has prevailed. I must, however, observe, that the people of Bengal are apt to attribute a vast many things to Man Singha, in which, I suspect, he had no concern; and that the mosque called Akburabad was undoubtedly built by Futehjung Khan, who probably, therefore, gave the name of Akburnagar to the city. I suspect, therefore, that the name Rajmahal is older than the time of Akbur; although I must confess, that, after a most careful investigation of the place, I have not been able to find any traces of considerable antiquity, nor have I been able to learn one tradition concerning any Raja, by whom it was formerly



occupied. Before the arrival of Man Singha, however, it appears to have been a place of note, as being the residence of Futehjung Khan, who from the size of his works has evidently been an officer of distinction. The Akburabad mosque, although not very large, has been a very neat work; some chambers, and a gate of his house remain, which show it to have belonged to a person of rank; and his tomb is equal to that of the persons of highest dignity, that are buried in the vicinity, and have been works of considerable elegance. It is, however, very probable, that Man Singha killed Futehjung; for bloody feuds between officers of the same government, in the general opinion of the natives, are considered as of little importance, and I suspect, even in the best periods of the Mogul government have not been uncommon.

The house of Man Singha called Huduf, is shown, and has been partly built of stone; but it would not appear to have been a palace sufficient to excite the jealousy of Akbar. The Jomma Musjed is however much superior to the mosque of his rival, and by its magnitude seems intended to have acquired the confidence of the faithful. Although very inferior in size to Adinah, which I have described in my account of Dinajpoor, it seems to me constructed with more taste, and far surpasses any of the buildings that I saw in Gaur. I have therefore given a ground plan and elevation (in the succeeding page). Its outline pleases me more than that of any large native building, which I have seen in the course of this survey; but in this district some of the smaller buildings of the Moslems are certainly in a better taste. The execution of the Jomma Musjed is however exceedingly rude, whether considered as a mere piece of masonry, or in the delineation of the smaller numbers of the building. The great temple on the inside, exclusive of the small chambers at the end, measures 188 by 60 feet, which will serve as a scale for the drawings. This building has no endowment, is fast hastening to ruin, and is no longer a place of worship.\*

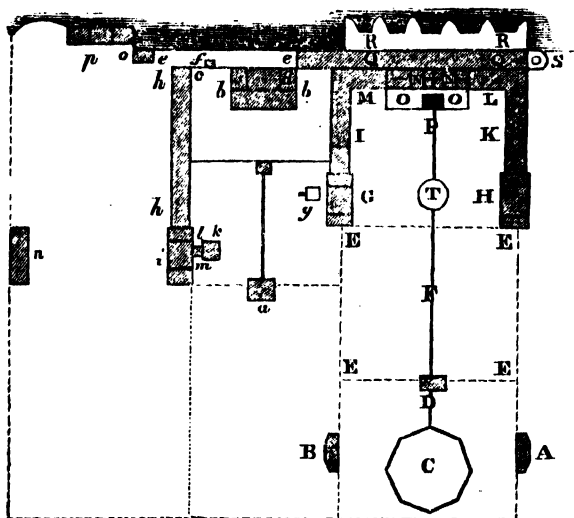
\* Unless drawings be made of the various temples and antiquities of In 'ia, in a few years more not a trace of them will be extant. [Ed.]



Rajmahal, during the whole time of the Mogul government continued a place of importance, although I was not able to trace the succession of its governors, the people being sunk into the most brutal state of dissipation and ignorance. It was however raised to great eminence, by being made the residence of Sultan Shuja, son of Jahanggir, who governed both Bengal and Behar, for site of the capital of which it is admirable situated. This prince at first, took up his residence in the palace of the kings of Bengal at Gaur, which to his ancestor Homayun had appeared a paradise; but what appeared in that light to the hardy Tartar, was probably considered by his luxurious descendant as a dungeon; and even for his temporary residence it became necessary to erect a building of greater splendour. This now called the Sunggidalan or stone hall, although in a miserable state of ruin and dilapidation, still contains traces to show that by its

magnitude and numerous accommodations it was fitted for the abode of any prince; and a view of it evinces the height of magnificence to which the family of Taimur had arrived, when such enormous buildings were required for the temporary accommodation of one of its sons, when employed at a distance from the capital.

A great deal of the building has been pulled down for its materials, especially for its stones, which have been employed to erect the palaces of the Nawabs at Moorshedabad; and much has been removed to make room for modern hovels; but a survey of the remains, and the accompanying sketch



Ground plan of the ruins of the Sunggidalan at Rajmahal.

will justify what I have said. Near the ruinous inn, which I am assured occupies part of the situation of the palace, may be observed two gateways (A B) which, as usual in Muhammedan buildings are very large and handsome. Entering by the eastern one (A) the visitor probably came into a court, in the centre of which was an octagon reservoir for water (C) each side 32 feet in length, and constructed of brick. The water was conveyed to it by a narrow canal of the same materials (F) which seems to have been formed in the middle of an elevated walk, that led by the right of the court to the

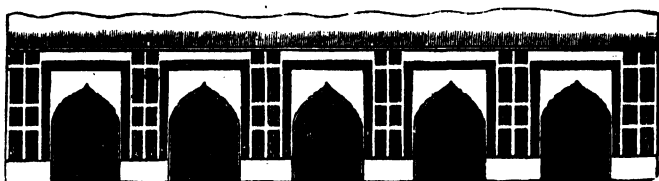
interior of the palace. On this road, at no great distance from the reservoir, has been a smaller gateway (D) leading into another court (E E E E) which was nearly square, and extended to the wings of the principal court of the palace. This court is intersected from north to south by the road, and no remains of buildings can be traced, although some probably existed.

The great court of the palace was surrounded on three sides by buildings of brick, two stories high, which consisted of a great central building (N N), with two great wings (G H), connected by four lower ranges (M L I K). The central building had before it a terrace (O O), in the middle of which was a square reservoir (P), from whence the water fell into the canal, and was conveyed into another octagon reservoir near the entrance of this court, from whence again it passed through the canal into the reservoir (C) in the outermost court. This great central building, evidently the most ornamented part of the whole was in the upper story divided into three apartments, a large one in the centre, and a smaller at each end; but the three rooms communicated by very wide and lofty arches. The lower story of this must have been very dismal. Under each end room it is divided into two by a longitudinal wall; under the centre it is first divided into four by transverse walls, and then the two middle divisions are each subdivided into two. The interior decorations of this building can no longer be traced, but the plaster on the outside has contained wreathed mouldings in a good taste. Each of the two great wings on the upper floor, has been divided into three chambers as in the centre, only smaller. The lower buildings (I K L M) by which the three great ones are connected, have been subdivided into a vast number of apartments, that, owing to rubbish, dirt, and disgusting and dangerous reptiles, it would be difficult to trace. Between the farther buildings of this great court and the river has been a row of apartments, or at least arched passages (Q Q), communicating one side with the lower story of these buildings, and on the other with a terrace (R R) overhanging the Ganges, which is called the Tukht. The greater part of this has been undermined, and has fallen into the river in immense masses, so that the form in the plan is laid down, from what I judge it may have been from some fragments that remain entire, but are not sufficient to

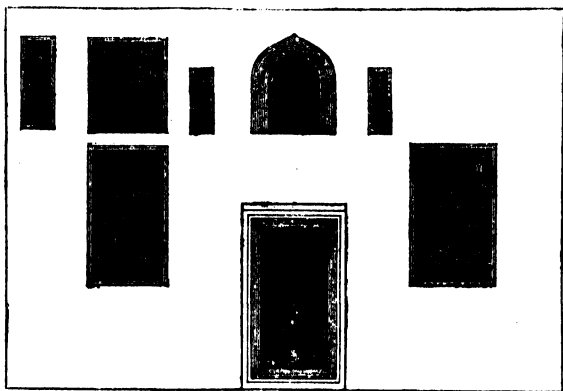
enable a plan to be traced with accuracy. At the east end of the row of buildings (Q Q), is a great well lined with brick, through which the river water was raised by machinery to supply the palace, and the jet d'eaux, that were undoubtedly in the reservoirs, of at least the great court; and into which the natives imagine that the ladies of Sultan Shuja threw themselves with all their ornaments, when he fled before the victorious troops of his brother. The great court of the palace is considered by the natives as having been the ladies apartment; but I am convinced that it is a mistake, as I shall afterwards have occasion to show. I see nothing about these buildings marking that cautious jealousy, with which the Muhammedans watch this precious commodity. I am persuaded, that the great court is the place where the public entertainments were given, and all round the cornices of the buildings are fixed rings of stone, to which the sides of a canopy could be fixed, so as to shade the whole court.

Returning to the reservoir where we first began, and passing the gate (B), the visitor comes into another court, where most of the buildings have been destroyed, having probably been small places or huts, for the accommodation of troops; but turning to the right, you come to a gateway of considerable size (*a*), which is called Mojragah. Immediately within this is another great court, having in front of the gate an elevated terrace (*c, c, c, c,*) on which is erected the Dewan khanah, where the sultan and his officers sat to administer justice, transact business, and give audience. Those who were admitted to this honour, began their prostrations at the Mojragah, and continued frequently to repeat them as they advanced to approach as near the royal person as the etiquette permitted. The Dewan khanah (*b b*) is the part of the building that is in a state most fit to give an idea of the whole, the walls being entire. It is true, that the cornice has been injured by a new roof added by Mr. Dickson, who covered the building, then very ruinous, and has preserved it as a treasury, for which it still serves, although it has again become ruinous. It consists of an open gallery extending the whole length of the front, and behind this of three apartments which are very dark. This building is only of one story, and next to the central part of the first great court

has no doubt, been the highest finished part of the whole. The view of its front will probably induce the reader to



conclude with me, that whatever may have been the magnificence of the palace, its elegance was on a very confined scale; and this will be farther confirmed by the drawing,



which represents the finishing of one side of the room (*d*), at the east end of the Dewan khanah, where the original plaster remains perfectly entire. The east side of the court of the Dewan khanah is shut in by the buildings (*G I*), which form the west side of the grand court; and the covered gallery (*QQ*) extends so far along its back, as to form a communication with the back of the Dewan khanah, and with a low terrace (*ee*) between that and the river, to which at its east

end there is a descent by a small stair (*f*). On the right, entering the court of the Dewan khanah, is a small square terrace (*g*) on which, it is said, the officer called Dewan sat, while the Sultan gave audience, but it does not seem suited for such a purpose, as it appears to have had no shelter.

The east side of the court of the Dewan khanah consists of a low range of buildings (*h h*), which communicates with one consisting of two stories (*i*), the upper as usual, divided into three apartments. This has no windows towards the court of the Dewan khanah, but behind it is a small room (*k*), which has a door towards that court, and communicates by a passage (*l*) with the interior of the building. On the outside of this passage, facing towards the gate and guard-room (*a*), called Mojragah, are niches apparently intended for the accommodation of a guard. This passage seems to me to be that by which the prince passed into his ladies apartments; and these, I presume, composed a third court, bounded on the east by the buildings (*h, h, i*) of the court of the Dewan khanah, and on the west by a similar row, of which the greater part has been removed, to make room for a bungalow built by an European; but the building (*n*), which formed its end most remote from the river still remains, and is exactly similar to the one (*i*) opposite to it. If this was really the abode of the ladies, large walls no doubt surrounded it; but of these no traces remain. Towards the river this interior court had some small buildings, two of which are still pretty entire, but so much transformed and concealed by the additions of some Goth, that their original form can be scarcely traced. The one most highly finished is a small oratory (*o*), 18 feet by 12 on the inside. Its front consists of white marble tolerably polished, and neatly inlaid with pious sentences in black marble. The *minars* or columns at the corners have been built into the walls of a room, where the Goth probably swilled cool claret, and which from its neatness would have deserved some credit, had it not totally destroyed the face of the building against which it was erected; for these minars are the most ornamental parts of Moslem temples. The interior of the oratory has been totally preserved, but has always been clumsy, the marble extending only a little way up the walls. The only injury that the interior of this chamber has suffered, is that in repairing the roof, the Goth has removed the

ceiling, and left the beams staring in all the bareness of Anglo-Indian architecture. The other parts of the outside he has also completely changed, by adding a bath to one end of the oratory, and by white-washing the whole; but the rain has begun to remedy this, and shows that the outside has been painted, and enamelled with very gaudy colours. East from this oratory, and overhanging the river, is a small building, where the prince and his ladies are said to have sat while enjoying the fresh air that blows from the water. This originally consisted of three long narrow apartments, which the Goth to increase accommodation, has divided into five. That in the centre was open at the sides, where the roof was supported by little clumsy pillars and arches of black marble; but it has a pleasant situation, and the ceiling has been very neat. The two end apartments were very long with small windows, through which alone the ladies were probably allowed to peep. These have been cut down to the floor and enlarged, so as to admit a ventilation necessary in such a climate for European existence, and the whole has been surrounded by an open gallery, which added much to the comfort of the accommodations, but was not much suited to the taste of the original building, which in fact should have been left undisturbed; and the gentleman might have been much better accommodated, and on more reasonable terms, by a building entirely new.

Although the palace derives its name from stone, no great quantity of that material seems to have entered its composition. The doors, windows, and a row next the foundation of the chief part, seem to have been the whole, and the removal of these by cutting them out of the wall, seems to have been what has principally reduced a very strong and massy building to such a wretched state of decay. At a considerable distance south-west from the Sunggidalan is a ruin called the Phulvari, or flower garden, which some attribute to Sultan Shuja, and others to a Hasunali Khan, who was Faujdar or governor of the place since the time of that prince. It consists of several brick houses, each of such a size as is usually occupied by the chief European officers of the Bengal government residing in the country, and placed at some distance from each other, in a fine grove of mango trees. Its size is no doubt suited for the abode of a person of high



rank; but it retains no traces of elegance. Near this is the tomb of Bukht Homa, widow of a Shayesta Khan, who is said to have been an aid-de-camp (Mosaheb) to Aurungzebe. It is certainly the building of best taste in the place. A square space, containing perhaps three acres, has been surrounded by a neat brick wall, consisting of a series of arches filled up by a small thickness of wall, which produces a very neat effect, and saves materials. At each corner is a neat octagon building, the lower story as high as the wall, the upper covered with a dome, and having in each side a wide arched window. In the middle of one side is the entry by a lofty, wide, and handsome gate, which is arched and ornamented with a dome and minarets. The area is planted, and in the centre is the tomb, which is square, with an open gallery of three arches on each side, and a small chamber at each corner. The building is adorned at the corners by four minarets, too low, as usual here, but in other respects neat. The tomb in the centre is covered by a dome of brick; and each of the corner apartments is covered by a wooden cupola with eight windows. These cupola, the upper parts of the minarets, and the whole cornice are painted with very bright colours. On the cornice, especially, is a row of fine blue Iris, very gaudy, but exceedingly stiff. Although this tomb has a considerable endowment, it is fast hastening to ruin, and the condition of the ground is exceedingly slovenly.

Some way south from thence is another monument, nearly on the same plan, but not so fine, although I was told by the keeper that it contains the remains of Merza Muhammedbeg Subah of Bengal, and father of Alaverdi Khan, who succeeded to that high office. South a little from thence was Nageswarbag, a palace built by Kasem ali, Subah of Bengal, and which seems to have been intended entirely for a luxurious retirement among women, as it contains only one set of apartments, within which most assuredly no man but himself could have been admitted. The situation is remarkably fine, on a high ground commanding a noble view of the great lake, of the hills, and of a very rich intermediate country. The building has been large; but, so far as I can judge, very destitute of taste. It consists of an immense wall of brick, perhaps 30 feet high, and 500 feet square. At one corner is an aperture by way of entrance, fortified without by walls and

guard rooms, which were intended for eunuchs; the places for the guard of cavalry being without. All round the inside of the wall ran a row of apartments, each consisting of a small court open above, and surrounded by small dark hovels, like pigeon holes, in which the ladies and their female attendants might have been crammed. The roofs of these apartments formed a walk, concealed by the upper part of the wall; but there are in this some small holes through which the ladies may have been allowed to peep. These apartments communicated with each other by an arched gallery, which surrounded the interior court. In the centre has been a square building, chiefly of wood, somewhat like the garden house of Hyder at Seringapatam. It was called Rungmahal, or the painted hall. The outside of the wall seems to have been surrounded by a row of sheds, which it is said were intended for the accommodation of a guard of cavalry, and of the male domestics. Kasem ali never occupied this house, having been put to flight just as it was finished. Some troops, that soon after came to check the incursions of the mountaineers, took up their quarters in and near it; and, although built only 57 years, it has been rendered a complete ruin, by taking away the timbers of the roof to build the house of the Nawab Rokunuddoulah, who lives at Rajmahal.

In the town is the tomb of Mirun, eldest son of Jafur ali, the successor of Kasem. This young prince was killed by lightning. His tomb is in the same style as the others, but inferior in size. Some attention is, however, paid to keep it neat, as many flowers are planted in it, and as the remainder is cultivated as a kitchen garden; and even onions and carrots look better than the rank weeds that usually spring in such places. These are the principal monuments in or near Rajmahal, but there are many small mosques and monuments too numerous to be mentioned here, although in other parts of the country I have noticed some that are of less size; because, from the scantiness of any thing except hovels in their vicinity, they have become of importance in the eyes of the people, who have seen no better. Rajmahal has no doubt greatly diminished since it was the seat of the government, which ruled the whole of Bengal and Behar; it has lost even in consequence since the courts have been remove

from it to Bhagulpoor, still, however, it is a large place; but the ruins and the scattered manner in which the town now stands, renders its appearance very dismal. The officers of police maintained, however, that it still contains 20,000 houses and 50,000 people, but even the latter seems greatly exaggerated, although it is in no proportion to the number of houses which they state. On inquiry, I found that it still contains 12 market places, scattered over an immense extent. On applying to the owners for an account of the people belonging to these market places, they gave me a list of 1285 houses; but this is probably as much diminished as the other account is exaggerated. Besides in villages, scattered in the places between these market places, there are a great many houses, so that I do not think that the population can be less than from 25 to 30,000 persons; and the number of travellers by land and water is generally very considerable. The supply of these with necessaries is, indeed, the chief support of the town. Atapoor, containing about 500 houses, and Kaligunj, containing 600, are the only other places that can be called towns.

**PHUTKIPOOR.**—At the northern end of this division is one small hill, and a long marsh extends along its western side. The greater part of it consists of land, that is constantly undergoing changes from the action of the Ganges, and very bare, although fertile, and tolerably cultivated. The inland part, belonging mostly to invalids, is miserably neglected, and exceedingly dismal, being mostly covered with long harsh grass. There is no dwelling house of brick, and no public work deserving notice.

**TURROKHABAD.**—The whole of this district is level; and some of it, owing to the changes produced by the Ganges, is rather bare; but in general it is tolerably occupied, and, where exempted from the influence of the river, the villages are finely sheltered with trees and bamboos, as in Bengal. There is no house, nor temple of brick, nor any public work, that deserves notice. Kharidangra and Jamur, containing each about 100 houses, are the only places that can be called towns. There is no remain of antiquity.

**PRATAPGUNJ.**—This country is all level, and a great part of it inundated; but, except in new-formed land, the villages

are finely sheltered with trees and bamboos, and a very few palms. It contains several small lakes or marshes, that never become entirely dry. The largest are at Chandakuri and Tarapoor, the former containing 1500, and the latter 1000 bigahs. It contains seven private buildings of brick, partly dwelling houses, partly chapels. There is no public work of any note. Shumshergunj, containing about 200 houses, is the only place that can be called a town. No remains of antiquity.

**AURUNGABAD.**—The country resembles the division last described; but contains no marsh nor lake worth noticing. There are two dwelling houses of brick, but one of them is ruinous. Five persons have brick chapels within their premises. There is no public work that is at all ornamental. Jafurgunj, containing about 100 houses, and Kaligunj containing about the same number, are the only places that can be called towns, although Manggalpoor, which contains about 60 houses, might be considered as a part of Kaligunj, as the two places are nearly adjacent.

At Mahishali, Basudevpoor, and Tangtipara are three tanks, which many allege to have been dug by Mahipal Raja; but on the spot I found the first attributed to a Mahes Raja, a person of the low tribe of Tiwars, to whom this part of the country is said to have at one time belonged. The greatest length of this tank, being from east to west, it has in all probability been dug by a Moslem. The people again of Basudevpoor attribute both their tank and that of Mahishali, to Viswakarma, the god of artists, who instructed the Chinese and Europeans in all their arts. The tanks are far from being worthy of such a personage. At Manggalpoor are some ruins, apparently those of a small town, which is generally admitted to have been the residence of a son-in-law of Lakshman Sen, king of Bengal. Some of the neighbouring Zemindars, as will be afterwards mentioned, claim a descent from this person. Among the small tanks and heaps of rubbish is a small piece of water called Jivatkunda. Formerly, it is said, any dead body might have been restored to life by being thrown into this pond; but, since the country has become subject to infidels, the water, it is certain, has lost its virtue. It is also imagined, that in this tank there is

a throne of stone (Merh); but in December, when I visited the place, it was not visible: the people said, that it would be seen in spring, when there would be less water.

KALEKAPOOR consists of two portions, separated by Virbhum; and each of these again consists of a small space well cultivated, and of a great tract almost totally neglected. The villages are more naked than is usual with those inhabited by Bengalese. Another portion is almost in a state of nature, and mostly covered with forests, which are kept stunted by frequent cutting for fire wood. A little towards the north-east is inundated, but in general the land is high though level. All Ambar is free from hills, but there are a few scattered through the wastes of Sultanabad. Both of the Zemindars have some brick buildings in their houses; that of Ambar is very decent, and is gradually improving by additions, made as the owner can afford. Several farmers have small brick places of worship, which they keep in neat order. There is no place that can be called a town, Virkati is the largest; nor is there any public building that deserves notice. Near Virkati are many small tanks, as if there had been a considerable town; but I see no traces of buildings, nor is there any tradition of a town having been in that situation.

CHANDRAPOOR.—In the year 1796, many robberies having been committed in Virbhum, then under the magistrate of Moorshedabad, and it being pretended, that the perpetrators belonged to the southern tribe of mountaineers, Mr. Brooke, then magistrate of Moorshedabad, applied to Mr. Fombelle, then magistrate of Bhagulpoor, to check the inroads. Accordingly a thanah was established at Chandrapoor, and a small portion of Virbhum was placed under the superintendence of a Darogah.

LAKARDEWANI.—The country is naturally beautiful, as it consists of very rich lands, finely interspersed with detached rocky hills, that are covered with wood. Near Nuni these form a small cluster; but in many directions it is intersected by level passages. The country, however, has been miserably neglected, and is overrun with forests, and the houses are very mean. The most usual fences, as in Bangka, are formed of dry branches and leaves, so as to conceal the huts altogether. The forests, as in the adjacent parts of Bangka,

consist chiefly of Mowal about the villages, and of Sakuya and Asan in more remote parts. Many of these trees are stunted by extracting rosin or by feeding Tasar; but in some parts the trees attain a tolerable size. There are only a few bamboos. The cultivated parts are finely planted, with mangoes chiefly, and a few palms. There is no house of brick, nor any public building deserving notice. Kengduya is the only place that can be called a town, and may contain about 100 houses. No remains of antiquity worth notice. The northern parts are in the Mogul province of Behar, and the southern in that of Bengal; but the Mogul authority seems to have extended very little into these parts. Several tribes yet remain, who speak languages totally different from both Hindi and Bengalese; and the dialects of both these languages, that are in use, are most miserably corrupt, or rather unimproved. The southern parts are considered as belonging to Anggades.

**TERRITORY BELONGING TO THE MOUNTAINEERS.**—There still remains to be described a large portion of the district, which is not included in any regular divisions established for the administration of justice, or preservation of order: because it is occupied by mountaineers, who are exempted from the ordinary course of law, and from all taxes. Causes, not affecting the public peace, they settle among themselves, by their own customs; but they are bribed by annual pensions to give up such as commit violent outrages, such as robbery and murder; and these are punished by the judge, provided an assembly of their countrymen finds them guilty. The territory of the mountaineers may be divided into a northern and southern portion: the former occupied by a tribe, that has an appropriate language, that eats beef, and has not the least vestige of the doctrine of caste; the southern tribe has adopted the Hindi or Bengalese languages, according as these prevail in the low-lands adjacent to their hills; with this they have adopted the spiritual guidance of some low Hindus, and the doctrine of caste; and finally they have rejected the use of beef.

**TERRITORY OF THE NORTHERN TRIBE OF MOUNTAINEERS.**—It is by far the most extensive, and in general is the best defined, because the impurity of its manners has secured this tribe better from intrusion. In fixing a boundary two

difficulties occur. In the very middle of the division of Faye-zullahgunj are scattered some hills, occupied by the mountaineers, who, although constantly traversing that territory, and daily dealing with its people, are exempted from the jurisdiction of its officers. If these could be induced to retire to hills, that are unoccupied, of which there are many, I think it would be highly advantageous. In the next place, in the centre of the territory belonging to this tribe, there is a tract of fertile level land, lying on both sides of a fine river, and undoubtedly belonging to the Zemindar of Manihari, although he pays no rent, and has entirely deserted it; while the only lands, that remain occupied, have been purchased by the company, and are given in part to some of the armed men, that are under the Suzawul. All these persons, and all those, who cultivate their grounds, or whom the Zemindar might send to occupy grounds belonging to him, would be under the authority of the ordinary police, which is likely to produce a jarring of authority, not easily conducted without dispute. I would, therefore, propose, that a person, entrusted with the care of the communication between government and this northern tribe, should reside at Majhuya, in this arable tract, and have the authority of Darogah, over its low-land inhabitants. It may contain 36 square miles of an exceedingly rich soil, and, if protection were offered, might maintain a great many people; while traders, residing in it, would supply the wants of the mountaineers. From Faye-zullahgunj to this tract, which is distinguished in the accompanying map by red, while the lands of the tribe are marked green, is a level route, that I travelled, and passes between the hills, that are regularly delineated; while on all other sides it is surrounded by hills closely adjoining, which in general I have not been able to trace with precision. I presume, that this was the route, by which the Mahratta army entered Bengal; although none of the people, whom I consulted, had ever heard of such an event; but in the time of Captain Browne (1772) it was still remembered. The road, however, is much worse, than was represented to that gentleman; for, although so far as Majhuya is tolerably level, yet it is exceedingly strong against cavalry, being narrow and covered with wood; and between Majhuya and Rajmahal hills of a considerable height intervene. The most common passage is by Chaundi, to the summit of

which I found an exceedingly fatiguing journey ; and I have no doubt, from traces, which I saw, that this was the way, by which the Mahrattas came ; as by the side of the road were collected many heaps of stones, which the mountaineers said their fathers had thrown together by orders of an army, which came that way. They knew not indeed the nation, of which the army was composed, a circumstance in which they were in no degree interested. So far as I could judge, from viewing the country from several hills, there probably might be found many passages through these mountains ; but these are so broken by watercourses, that few of them are fit for the plough, and the hills are more easy of access.

The hills in general are two or three miles long, and half a mile wide, and very steep and rugged. Among them there are many springs, and small streams. The villages are neater, and the huts better than those of the ordinary farmers on the plain. In many parts the views from them are exceedingly fine, although the woods almost every where are stunted. This on the hills arises from their being cut and burned after a growth of from six to eight years, in order for the fields to be cultivated. On the plains it arises from the trees being cut for fire wood, which keeps low all towards the north and east ; but on the west side there are some forests of a tolerable growth. There are but few bamboos.

The only antiquity in this division is Lakrugar, an old fort in the central arable land, where a Raja of the Nat tribe named Duriyar Singha resided, and governed the mountaineers as well as the Nat, some of whom remain in the vicinity, and seem originally to have been of the same race with the mountaineers. He was driven out by the Kshetauris, who now possess the country, and who had a fort at Majhuya about two miles from the former. Here they resided for some generations, until the father of the present Zemindar, being inflamed with jealousy, excited the mountaineers to murder a Mogul officer. After this the mountaineers, discovering the imbecility of government, became too turbulent for the management of the Zemindar, who was compelled to retire to the low country.

**THE SOUTHERN DIVISION OF THE COUNTRY**—Is a much more fertile territory than that occupied by the northern tribe, being much less mountainous ; but it is less populous, as from



fear of disturbance, it is the hills alone that either tribe is willing to cultivate, knowing that on these the lowlanders will make no encroachment. Except in the south-west corner the hills are low and detached, and roads frequented by carts or oxen pass through them in many directions. Owing to the vast demand for charcoal, on account of the iron mines in Virbhum, the woods are very much stunted. The villages of the hill people are much inferior in neatness and comfort, to those of the northern tribe. There are no traces of antiquities.

## CHAPTER III.

POPULATION, EDUCATION, RELIGION, MANNERS AND  
CUSTOMS, ETC.

In the Fusli year 1209 (A. D. 1802) Government, it is said, ordered a *Khanah Shomari*, or list of inhabitants to be prepared. It was in two divisions only that I procured the result, and the nature of this satisfied me that I had nothing to regret in the want of the record. In forming an estimate of the population I have not been able to rely much on any general statements procured from the natives, because I often found them unwilling, and not unfrequently unable to give me such information as I wanted. I have proceeded in the first place by estimating the number of people required to cultivate the extent of land occupied in every division, having taken into consideration the various natures of the soil and crops, the different quantities of stock, and the various degrees of industry among the people. I have then compared the proportions between the agricultural population and the other classes of society, as given by the natives; but with this I have seldom found occasion to be satisfied, and have endeavoured to correct the numbers in these classes from very minute inquiries made by the Pandit of the survey; because I think his inquiries concerning the various castes occasioned less suspicion than those respecting the number of houses occupied by cultivators, artificers, and idlers, such being immediately and evidently connected with the value of each estate.

It must be observed, that the proportion of land cultivated twice in the year is here much smaller than towards the east, and that in many parts a very large proportion is sown either without a previous ploughing, or with very slight cultivation, while the stock of cattle is strong. On this account, notwithstanding an uncommon indolence and want of skill, one man in general cultivates more land than is done in Bengal. Had I indeed taken the reports of the farmers, I should have in some cases allowed 40 bigahs for one plough; but in such

cases the ploughman does no other work, and people are hired to perform every other part of the labour.

In the Appendix will be found the results of my inquiries concerning the population of this district, together with an estimate respecting some of the causes by which it is affected. A few (500) of the young men, chiefly from Mungger and the villages occupied by invalids, have entered into the regular corps of the army; but this number is so inconsiderable as not to affect the population. A large proportion of the northern hill tribe belongs to a military corps; but as this seldom, if ever, leaves the district, and as many of their women live with the soldiers in cantonments, this does not in any considerable degree affect the population. In fact this tribe is much more flourishing than the southern, scarcely any of whom enter into service of any kind. Many of the people would wish to be considered as by birth qualified for the profession of arms, and on that account most of them excuse themselves from manual labour, at least of any severe nature, but some condescend to hold the plough, and all have farms either free or rented. They endeavour as much as possible to have these cultivated by servants, and prefer much to agriculture the casual employment of acting as daily messengers (Mohasel or Muzkuri). In general they are not well qualified for their profession by personal endowments, and they cannot endure the restraints which European discipline requires. They fill up however the enormous police establishment which is here maintained, and, I believe, would be exceedingly willing to assist any party in a predatory warfare. The men serving in the regular police (Burukandaj) are superior both in knowledge and appearance to those commonly found in Bengal; but those paid in lands for military service are very indifferent. It was reckoned that in the whole district there were 9210 men dedicated by birth to the use of arms, and willing to be employed in this kind of service. Of these only 4045 had found regular employment at home, 1580 had gone to other places in quest of employment, and 1110 strangers were here in addition employed. The military service, therefore, makes very little drain on population. The civil service rather gives an increase of population. In the whole district it was estimated that 1107 men had gone to distant parts in quest of this employment, and that 1260

strangers had here found service. Commerce makes little change on the population. A few Bengalese traders are settled in the wilder parts, but most of the commerce is carried on by natives. The number of boats is very small, and even these are mostly manned by people from the Puraniya district. In fact the people are of a very domestic turn, exceedingly unwilling to go abroad, and at home make very little exertion; but there is in this a good deal of difference. In the western parts near the Ganges, and in the eastern corner towards Moorshedabad, the people are more industrious than they are about Rajmahal, Kahalgang, and through what is called the Janggaltari.

The drains on population are very small, and in general the manners of both women and men are exceedingly strict. Notwithstanding these circumstances, and an uninterrupted peace for a number of years, with a large extent of very fertile territory unoccupied, it would appear from the reports of the natives, that the population is in some places on the diminution, and scarcely any where is advancing with that rapidity which might be expected. For this diminution or slow progression of population various reasons are assigned, and deserve especial notice. The system of premature marriages is carried to a very destructive length, and no doubt contributes to check population; but not to a greater degree than in many parts, where the population has made a rapid increase. The widows, who adhere to the rigid rule of Hindu celibacy, are here more numerous than in Bengal. This however is probably not more than sufficient to counterbalance the superior strictness in the moral conduct of the wives of Bhagulpoor.

The practice of inoculation is almost universal; but the few families that reject it, will in all probability continue obstinately to adhere to their refusal; for it has become a rule of caste. Some of them are Moslems of rank, who adhere to their folly from a knowledge of the doctrine which their prophet taught. The greater prevalence of inoculation in this district than in some of those already surveyed ought to have produced an increase of population; but other diseases are no doubt common, and it is to sickness that many attribute the decrease in the number of people. This I am persuaded is a mistake; for in the first place, the diseases

peculiar to India, especially the Koranda, which chiefly affects propagation, are not near so common as towards the east; and fevers, the most common destroyer of mankind, are not near so common as in Puraniya. In the next place, the most populous part of the district, near Moorshedabad, is just that where these two diseases are the most severe. It is true, that in Rajmahal, Paingti, and Fayezullahgunj fevers are stated to be more common, but they are not near so fatal. The western parts of the district are, for a warm climate, uncommonly healthy, yet many parts there are very thinly inhabited. Fevers in general are not so dangerous as in Europe, and it is only in the eastern corner of the district that a great proportion assume a bad form. This indeed is said to have been only the case for about 17 or 18 years; for until then the vicinity of Moorshedabad was by the natives considered as rather salubrious; but now a sad reverse has taken place, and almost every year there is in that part of the country a severe autumnal epidemic. Every where in the vicinity of the hills and woods the vernal epidemic is more severe than in cultivated plains; but I no where heard that it equalled in severity the epidemic of autumn. Fluxes, pituitous and bilious, are more common in spring than autumn; but are neither very frequent nor destructive. Choleras are far from common.

The people afflicted with both kinds of leprosy are viewed here with the same injustice that follows them in Puraniya. I saw several instances of complete albinos, with weak blue eyes, and white hair. Two of them were children born of parents quite black, and apparently in good health; but the children were weakly. At Tarapoor in this district I saw two dwarfs, both adult men: one of them was 3 feet 9½ inches high, and tolerably well made; the other was somewhat smaller, but he was rather distorted. The different chronic swellings are here much rarer than in the districts hitherto surveyed. Persons who reside on the right bank of the Ganges seem little subject to the swelling which affects the throat, and most of those in the divisions south from the great river who have this disease have been affected during a residence of considerable length on the opposite bank. The people who live on the bank of the Mon river are considered as peculiarly liable to this disease. It is said that Haradatta Singha, a neighbouring Zemindar, dug there a fine well

(Indara,) which was lined with brick. While this well continued in repair the disease is said to have appeared in the vicinity less frequently; but, since the water has become bad, the disorder has become as common as ever. These circumstances would seem to point out a certain condition of the water used as the cause of the disease; and it may be supposed, that the water of the Ganges is purified, by a long course, from the quality that produces this disease, and which seems to be peculiar to the water of Alpine regions. I am however told, that the people of the Northern hill tribe are subject to this complaint, and their hills have nothing approaching to an alpine elevation. On passing the boundary of the Mogul province of Bengal the *Sarcocoele* becomes a more rare disease, and seems to diminish more and more towards the west.

In this district the fever, accompanied by an enlargement in the glands of the neck, is very rare; but that attributed to a diseased state of the nose is now exceedingly common and troublesome; for it usually attacks those who are liable to it almost every month, and lasts two or three days at a time. Formerly, as it is said, this disease was not common, and it is for only five or six years that it has become so prevalent. The people of this district, and those of the hill tribes more particularly, are much subject to rheumatism, which seems to be owing to a want of sufficient clothing, and to their supplying the want in cold weather by hanging much over a fire.

As to the condition and manner of living of the people I shall chiefly confine my remarks to the manners of the people inhabiting the more civilized parts on the banks of the Ganges, and who speak the Hindi language. The people of rank here are still more fond than in Puraniya of going out with a numerous attendance, especially of armed men; but in every other respect their appearance is very mean and squalid, and their marriage ceremonies are so enormously expensive, as to render the utmost parsimony on other occasions absolutely necessary. Funerals are conducted on more rational principles, but still are exceedingly burthensome. The practice of hoarding bullion is supposed to be very general, especially among the middle ranks, whose external appearance is in general very mean.

In the three considerable towns of the district, the former

residence of Moslem chiefs, seems to have introduced the custom of building houses of brick, which are pretty numerous. They are in general occupied by traders, and no zemindar has a house becoming the rank of a gentleman. The best are in the parts belonging to Bengal. The brick houses of the towns are in the very worst style, and the meanest that I have seen any where except in Maldeh. Some of them have tiled roofs, but in general they are covered with plastered terraces. The clay houses are of two kinds, one having two stories, and the other only one. The former usually consist of one chamber on each floor, and most commonly it has in front of the lower story an open gallery supported by small wooden posts. The stair is extremely wretched, and indeed the most common means of mounting to the upper room is by means of a ladder. The usual dimensions are from nine to fifteen cubits long, by from seven to ten cubits wide. In the upper room a person cannot always stand erect, the lower is generally six or seven cubits high. There are always wooden doors. The roof is thatched with a frame of wood and bamboos. The walls are not white-washed, nor in Behar, especially, are they well smoothed. The floor is terraced with clay. A house of this kind costs from 20 to 25 rupees, and will last 15 years; but it requires annual repairs. If the roof is burned, the walls are not materially injured, and much of the property in the lower apartment may be saved.

The houses with mud walls and consisting of one story, are thatched, and have no ceiling covered with clay to lessen the danger from fire. These houses consist of one apartment, of the same size with those of two stories, and have seldom any gallery. The roof is in general of the same shape with that in the eastern parts of Bengal, consisting of two sides meeting in an arched ridge; but the pitch is usually very low, and they are commonly of the structure called Chauka, of which I have given an account in treating of Puraniya. In Kalikapoor most of the roofs consist of four triangular sides, forming a kind of pyramid; or, if the house is oblong, the two lateral triangles are truncated. In that part of the country the houses are neater and cleaner than in Behar. Among the woods, many houses have walls of bamboos split and interwoven like a basket. The hovels in form of a bee-

hive are not so common as in Puraniya. They are most usual on the north side of the river, where bamboos are very scarce, and in Fayezullahgunj, where the people are totally abandoned to sloth.

If there is any native house in the district sufficiently large to accommodate a wealthy family, the number must be exceedingly small; and the usual abode of the wealthy consists of a number of buildings, each of one apartment, or perhaps one of the number may contain two rooms. Wherever the owner can afford it, the whole is hid by walls or fences, which are generally very unseemly. The best are mud walls thatched to prevent the rain from washing them away. Bamboos, which in many parts are very cheap, make a neat fence, but it admits of too much peeping. Dry branches, with the withered leaves adhering, are preferred in the woods, and reeds confined by bamboo splits are chosen in the open country. The huts in the latter are usually built close together, and seldom separated by quick-set hedges or gardens, or sheltered by gourds, climbing beans, or other plants, so that they appear naked, and fires are exceedingly destructive. The spaces between the huts are in general as slovenly as in Puraniya. The people here have scarcely any furniture, except bedding, and some brass, copper, and bell metal vessels. Bedsteads are much more common than in Puraniya. The best are called Palang or Chhaparkhat, and their wooden work is somewhat polished, while they have curtains, mattresses, pillows, and a sheet, and the people who sleep on them cover themselves with sheets or quilts, according to the weather. The next kind, called Charpayi, is very rough, but the feet are turned, and the bottom is made of ropes, wrought pretty close together. These have no curtains, and it is a few only that have a very bad mattress. The ropes are usually covered with a blanket, a small cotton carpet, or a quilt. The worst kind of bedsteads called Khatiyas, are made entirely of rough sticks rudely joined together, and the bottom is made of straw or grass ropes. A coarse quilt serves for bedding. A few during the floods sleep on bamboo stages. Many sleep on the ground, chiefly on mats made of grass (Kusa), or of palm leaves.

In the parts of this district that belonged to Behar, the fashions of dress are nearly the same as in Puraniya. The



higher ranks of Hindus, even Pandits, have on occasions of great ceremony adopted, in a great measure, the Muhammedan dress. Many of the Brahmins, as in the south of India, wear a cap of cotton cloth dyed, which sits close to the head, and descends with two flaps over the ears. It is a very ugly thing, but seems to be the original dress of the sacred order. In general it may be observed, that the people here, especially the women, are, if possible, more dirty than those even of Puraniya, and that their clothing is more scanty. The poorer women are allowed only one piece of cloth in the year, and it is not woven of a breadth sufficient to hide their nakedness, so that two breadths must be stitched together to make one wrapper, which, after all, is very scanty, and is called a Kiluya, while that of proper dimensions, woven of full breadth, is called a Sare. In the estimate, what is called silk, consists often of the Maldehi cloth, made of silk and cotton mixed. Some cloth of Tasar silk is made use of by women of rather a low rank; but very little of the Bhagul-poori cloth, made of silk and cotton, is used in this district.

Ornaments of the precious metals are not so common as even in Puraniya. The Hindu women usually ornament their arms with rings of coloured lac, and paint their foreheads with red lead. The women of the milk-men, however, and some other castes of labouring people, use rings of bell metal or brass, either for one or both arms. The Muhammedan women also use chiefly rings of coloured lac, of a shape different from those used by the Hindus; but many of them use rings made of glass, such as are worn in the south of India. Both religions give ornaments of tin to their children. The custom of anointing the body with oil in the western parts of the district is not very prevalent; but ploughmen, as almost every where in Bengal, during the rainy season, never work without rubbing their feet. Shoes or sandals are in general use with those who can afford the expense. In the parts of the district towards Moorshedabad, the people, especially the women, are more cleanly; they almost all anoint themselves frequently, and the women use much gold, silver, and shells as ornaments, nor do they daub their faces with red lead, except a small mark at the upper part of the nose. They also make only a few marks of the kind, that in the South Sea Islands is called tatooing; but the women of

Behar are almost as fond of this ornament as those of Otaheite, especially on the parts that here are most commonly visible. Some new fangled people, however, especially among the women of the Brahmans, begin to think that the black marks disfigure their skins, and these make no more stains than just enough to satisfy the conscience of those who would not drink water from the hand of a nymph whose skin was spotless. Women and children blacken their eyes with lamp-black and oil put under the lids. Men only use this mark of effeminacy at their marriage. The women tie their hair as in Puraniya.

In the Appendix will be found the result of my inquiries respecting the diet of the natives. At Bhagulpoor, Mungger, and Rajmahal, meat is every day to be had in the market; but it is so wretchedly lean, that it is unfit for the use of an European, except for soup. Goat meat is commonly sold, but beef is occasionally procurable. At Mungger, on account of the Europeans, a good many sheep are killed. In the other places very few, as the natives prefer goat flesh. A few young buffaloes, chiefly males, are brought to market. The Hindus of this country, except the very highest castes, would purchase meat from the butcher, could they afford it; but by far the greater part of the meat used in the district, is that offered by the Hindus or Muhammedans to their gods or saints. None of the sect of Vishnu ought to eat meat; but here many of them defer taking Upades until they arrive at a good age, and until then indulge their appetites; and on occasions of festivity do not prevent their wives and children from indulging theirs. There are, however, many that reject meat, and in the table these are included among those who cannot afford it. The helplessness of the people prevents them from procuring near so much game as they might easily have; still, however, this forms a very considerable portion of the meat that is used. The impure tribes in the greater part of the district are not so well provided with pork as in Puraniya.

In some parts of the district fish is seldom procurable; and in most parts there is a considerable proportion of the inhabitants that reject its use. In most parts, near the Ganges, fish is not procurable during the inundation, and it is only in Rajmahal and the divisions south from thence

that there is a regular abundance, or that the people are disposed to avail themselves of this kind of food, so much as is usual in Bengal. This of course greatly diminishes the nutrition which they receive, although they use more meat than is common in Bengal. Milk, however, is a more common article of food than in most parts of India; but it is almost entirely used after it has become acid and has curdled, which very much diminishes its nutritive qualities.

The portion of oil and salt, which the poor are able to procure, is very small. The rich have it in greater abundance, and the wealthy have from two to four curries at each meal. Those in middling ranks have this luxury five or six times a month; and the poorest at their marriage feasts or such high occasions. By consulting the table, the proportions of these different classes may be seen. Oil and salt, capsicum, and turmeric, are the grand articles of seasoning, acids are little employed. The quantity of foreign spiceries, chiefly black pepper, is very small, and the number of those who use them may be seen in the table. Ghipi also, or melted butter, is a luxury, the daily use of which falls to a very small proportion of the community.

With respect to the oil, the quantity considered as a full allowance for five people, young and old, varied in different places from 11 to 50 s. w., the latter in the capital, where much business is done by the lamp. The average is about  $20\frac{1}{2}$  s. w. The second class consumes from 5 to  $17\frac{1}{4}$  s. w., average  $10\frac{3}{4}$  s. w. The third class uses from  $2\frac{1}{2}$  to  $11\frac{1}{2}$  s. w. average  $5\frac{1}{2}$  s. w. The lowest class procures from  $1\frac{1}{2}$  to 5 s. w. average 3 s. w. As usual, this allowance contains the whole consumption for lamp, unction and kitchen, and no one can ascertain the proportion; but the higher classes using a much larger proportion for the two former purposes than the poorer, there is less difference in the quantity used as seasoning, than would appear in the above estimate.

The whole of the salt being used for seasoning, the difference in the proportions used by different classes is much greater; but as the rich use three or four dishes, while the poor use only one, their dishes are not higher salted; but their food is much better seasoned, as they have four dishes in place of one, to correct the insipidity of the grain, which forms the basis of their food. The people here never use ashes

to supply the place of salt. Very little of the salt from the coast of Coromandel is here in demand. The quantity said to be abundant for the daily consumption of five persons, young and old, varied in different divisions from 7 to 23 s. w.; but the average was rather more than  $12\frac{1}{4}$  s. w. and the people were commonly divided into four classes as with respect to oil, diminishing in various proportions; so that the second class varied from 4 to  $17\frac{1}{4}$  s. w., average 8 s. w.; the third class varied from 2 to 12 s. w., average  $4\frac{1}{2}$  s. w. The lowest class varied from 1 to  $5\frac{1}{2}$  s. w., average 3 s. w.

Rice forms the staple article of food with all that can afford it; but the rich sometimes, for the sake of variety, eat wheaten cakes. The poorer ranks must for a great part of the year content themselves with wheat, or still coarser grains. Some of these grains they boil in imitation of rice; but in general they are made into cakes or paste as I have before mentioned, and the paste is often made of different kinds of pulse; but this is not included in the table, where the pulse, stated to be used, is entirely dressed as a curry, and eaten as a seasoning with grain prepared by boiling or as bread or paste. In the wilder parts of the district, some of the poor, for some months in the year, cannot procure grain, and use in its stead the dried flowers of the Mahuya tree (*Bassia latifolia*), the seeds of the Sakuya (*Shorea robusta*), and some other natural productions. The quantity of cleaned grain stated to be sufficient for the daily consumption of five people, young and old, varied from 72 to 40 s. w., and the average is  $52\frac{1}{2}$  s. w. a trifle less than the average of Puraniya.

In some of the divisions, especially Lokmanpoor, Pratapgunj, and Furrokhabad, the proportion of those who drink distilled spirits is evidently underrated, and the same has been done respecting those who drink palm wine in Lokmanpoor, Kumurgunj, and Tarapoor, in the two latter of which, in particular, the practice is almost universal. Everywhere west from Udhawanala, throughout the cultivated country, the palms are plentiful. In almost every part of the district the only spirit used is distilled from Mahuya flowers. The spirits drawn by native artists both from grain and from this flower, have a smell so disgusting, that I have not been able to taste them so as to judge which is the least

execrable ; but I have had already occasion to dwell on the advantage that might arise from an improvement of the manufacture. The most execrable quality that can be imagined is no bar to excess ; on the contrary it rather conduces to it. This is strongly confirmed by what I have seen here. In no country have I seen so many drunken people walking abroad ; and in more than one instance I saw men, who from their dress were far above the vulgar, lying on the road perfectly stupified with drink, and that in the midst of day, and in places far removed from the luxury and dissipation of towns.

Different kinds of betle-nut possess very various degrees of narcotic qualities, but all, like other narcotics, produce an exhilaration and insensibility which accounts for the fondness with which this nut is devoured by nations, that are restrained from using strong liquors. All betle that is not dried, possesses this quality the strongest. The people here using much strong drink are less addicted to betle ; for, although a large proportion is said to procure betle in abundance, the quantity called such here, would towards the east be considered as trifling, few using it more than two or three times a day. At the capital eight leaves and two nuts are reckoned a full allowance for the most wealthy.

Fuel in almost every part of the district is abundant, as there is no place far removed either from forests, or from sandy banks overgrown with tamarisks. In fact charcoal and firewood form a considerable part of the exports of the district ; yet in almost every part cow dung, mixed with the husks of rice and other grain, forms some part of the fuel, because it is collected close to the house, and costs less trouble to bring home than wood, which may be two or three hundred yards off. Wherever the country is tolerably clear, the poor burn scarcely anything else, except towards Moorshedabad, where they are still worse economists, and burn much straw. In the cold season almost every family burns a fire all night, and sleeps round it. The consumption of lamp oil in religious ceremonies is much smaller, even in proportion to the number of inhabitants, than towards the east. The natives of this district are very fond of a numerous attendance and showy equipage ; but their poverty prevents them from vying in this point with those of Puraniya. Camels just begin to appear in the western extremity of this district.

The free male domestic servants of the great are of three kinds: Bhandaris who are stewards, and take care of all the household effects; Khedmutgars, who dress their master, attend him at meals, supply him with tobacco and betle, and make his bed; and Tabaliyus, who clean the kitchen and its utensils, bring wood and water, and buy provisions; but in common one man does everything, and takes care also of the horse, and of any cows and goats that may live in the house. Their wages vary from 8 to 24 anas a month, besides food and clothing. About 1 r. is however the average, the food may be as much and the clothing may be 4rs. a year. The whole allowance seldom exceeds 30rs. a year. Female free servants are in general not procurable, and those than can be had are commonly old women, who have lost all their kindred, and attend as domestics for food and raiment. The invalids have in general servants, male and female, whom during their service they either purchased, or acquired by the force of arms. Although such might be called slaves, this word would convey a very different idea concerning these persons, from what is the real case. In fact these boys and girls are looked upon by the old soldier as his children; and when he dies, he in general leaves them the whole of his effects. If the girl acquires a proper age, before the veteran's death, she often becomes his concubine; and many of them as wives, receive a pension from the Company.

Proper slaves of the male sex are in this district called Nufurs, and their women are called Laundis. They are confined to the part of the district included in Subah Behar. In general they belong to the owners of land, chiefly on free estates, or to wealthy Brahmans, who rent land. None of them are employed as confidential servants, such as in Pura-niya receive a good farm for the subsistence of their family; on the contrary they are generally very poorly provided, and the greater part of the men are employed in agriculture. Some of them, when there is nothing to do on the farm, attend their master as domestics; others are employed entirely as domestics, and living in their master's house receive food and raiment; finally, others are constantly employed on the field, and these get no allowance, when there is no work on the farm, but are allowed to cut fire-wood, or do any other kind of labour for a subsistence. When old, their allowance

is in general exceedingly scanty, and commonly depends in some measure, and sometimes in a great part upon what their children can spare. If they have no children they are sometimes turned out to beg. The usual daily allowance is about 3 sers Calcutta weight, or about 6lbs. of rough rice, or of the coarser grains, the great quantity of the husks of the former making it of less value than the latter. The slave from this must find clothing, salt, oil, and other seasoning, fuel, and cooking utensils. – His master gives him a wretched hut, where he lives almost alone; for, although he is always married, his wife and children live in the master's house, and there receive food and clothing. The women when young, are usually alleged to gratify their master's desires; and, when grown up, sweep the house, bring fuel and water, wash, beat and winnow grain, and in fact are women of all work. At night they go to their husbands' hut, unless when young and too attractive; in which case they are only allowed to make him occasional visits for the sake of decency. The boys, so soon as fit, are employed to tend cattle, are early married, if possible to a girl belonging to the same master; but sometimes the master has no girl of an age fit for marriage, and cannot purchase, in which case he allows his boy to marry a girl belonging to another master, or a free girl, in either of which cases he gets no share of the children. If a man has a marriageable girl, and no slave to whom he can give her, he allows her to marry another person's slave, or even a free man; but in both cases retains all the children. In general a free man marrying a slave girl is not personally degraded to slavery as in Puraniya; in other places he becomes a Chutiya-Golam (*cunno servus*), but cannot be sold; he works for his wife's master at the usual allowance that a slave receives. Slaves may be sold in whatever manner the master pleases; but they are not often brought to market. All the slaves are either of the Dhanuk or Rawani castes. Free men of the Dhanuk caste, if very poor, sell their children; but in this district this is not done by the Rawanis. The slaves here are in general industrious, seldom run away, and are seldom beaten.

I have procured no estimate of the mere domestic slaves, either male or female, that are kept by Muhammedans of rank, and of which class I have given an account in treating

of Puraniya. There are no doubt many such, as the chief persons in the district are Muhammedans, and some of them have, I understand, dealt in this commodity to a ruinous length. I saw two Abyssinian boys in the train of one person of rank, and he told me he had commissioned them from Calcutta on account of the character for fidelity, which this nation holds throughout the east. In the division of Mungger alone, I understand, that the Moslems have 50 male, and 70 female domestic slaves (Golam and Laundis).

The number of common beggars, that were estimated to be in the district, amounts to about 4000. I have certainly nowhere seen this class more numerous; and in general they are real objects. In general they have small huts; and are not destitute of food, so long as they are able to ask for it from door to door; but, when sick or infirm, they are in general totally neglected. Many poor persons, however, lame and blind, are sheltered by their kinsmen, and taken care of when unable to beg; but as their kinsmen are straitened, such are very naturally considered objects of charity, and procure from that source their common means of subsistence. It is those alone, who have no near kindred, that are suffered to perish from neglect; and this is more owing to the doctrine of caste than to a hardheartedness among the people. The Muhammedans are therefore more distinguished for real charity, than the Hindus; and I mention with satisfaction the goodness of Sheykhzayed Ali, a small Zemindar near Mungger, who supplies all the infirm poor, that live near him, with food. Mohan Das a wealthy religious Hindu mendicant of Lakardewani is entitled to the same praise. The number of sufferers is however great, and would shock the most hardened nation of Europe. In general the women of this district have a very fair character. The men are exceedingly addicted to intoxication, and particularly in the interior are very slothful. They are less charitable than in Dinajoor, but less addicted to robbery and theft. Yet there are many pilferers. The men are excessively jealous of their women, which leads to frequent murders. They are also of a most suspicious disposition with respect to the views of every person in authority, which one might not have expected, considering the kindness with which they have been treated, but they are conscious, that their burthens are nothing, and cannot be brought to think, that govern-



ment will preserve its faith. I may venture to say, that no people on earth has less regard to truth than themselves. Their men of business are only remarkable for chicane, in which they are complete adepts. In the interior I found the people uncommonly obliging, and my wants were cheerfully supplied; but everywhere near the great road, I heard of nothing but difficulties, raised entirely for the purpose of enhancing the price to an extent, of which my attendants most bitterly complained.

**EDUCATION.**—The schools for teaching to read the languages spoken by the Hindus, and the progress made are very near on the same footing as in Puraniya, but the number of teachers is smaller. In some parts, however, the Guru instructs the boys only in the mere rudiments of writing and arithmetic, by instructing them to form their letters and figures, on a board, with a reed and white ink, made of powdered mica. The boys are afterwards taught, by their parents, to write on paper, and to keep accounts. The teachers, where the Hindi language prevails, are called Gurus; but, where the Bengalese dialect is in use, they are called Pandits, a name, which in most parts of Bengal and Behar is confined to men of more exalted science.

In by far the greater part of the district the Hindi character and dialect almost universally prevail; except that a few rude tribes still retain languages peculiar to themselves, which, appearing to have derived very little from the Sangskrita, may be considered as pure aboriginal Hindu dialect, these tribes having in their appearance nothing of the Chinese nor Tartar race. The Hindi spoken in the better cultivated parts of the district differs no more from that of Mithila, than is usual in different parts of Puraniya, and the pronunciation is nearly the same. Among the hills and woods the accents vary much, and each tribe, even of those, which have adopted the Hindi dialect, retains many obsolete or strange words, besides an uncouthness of pronunciation, so that many of them are almost totally unintelligible. Even in the part of the province of Bengal, that is contained in this district the Hindi dialect, called Khotta, by the Bengalese, is very prevalent. In Paingti, Rajmahal and Phutkipoor there are more Khottas than Bengalese. In Furrokhabad they are about equal. In Pratapgunj and Auruggabad the Bengalese is by far the

most prevalent. In Kalikapoor and Chaudrapoor, scarcely any speak Hindi. In the north part of Lakardewani the Hindi, and in the south part the Bengalese is the most predominant; but both so corrupted by the accents and uncouth phrases of rude tribes, as to be with difficulty recognisable. The Bengalese usually spoken in this district is of the Gaur dialect, which extends along both banks of the Bhagirathi from Gaur to the sea; but differs considerably in different places. The people of Calcutta, who speak the dialect of Gaur, although confounded by the pride of the west with Bengalese, in their turn, as usual, ridicule the accent of the people of Dhaka, who are the proper Bengalese; and Calcutta being at present the capital, the men of rank at Dhaka are becoming ashamed of their provincial accent, and endeavour to speak like the Babus of the former city. In the southern parts of Lakardewani and Bangka the Bengalese resembles that of Virbhum, which is a part of Augga. The revenue accompts in the province of Bengal are kept in Bengalese even at Rajmahal, where as I have said, the Hindi language is most prevalent.

The Bengalese of this district, as elsewhere, call their polite or poetical language Prakrit, and the books in it, which they most usually study, are those written by Kavikangkan and Kasi Dasi. None of the women can read the common character, and very few understand the poetical language when it is read by others. In this district those who use the Hindi dialect in common affairs, write the Nagri character; and the highest ranks, even the Pandits, both in common discourse and epistolary correspondence on ordinary affairs, employ the language that is commonly spoken, and is intelligible to the vulgar. It is promiscuously called the Bhasha or Desbhasha, and no books have been composed in it. The compositions which they possess, that are not in pure Sangskrita, are all so mixed with that language, as to be unintelligible to the vulgar; and this language also is called Bhasha. The Ramayan of Tulasidasi is the one most used, and is much more read than understood. I am told, that of the 16 people who read it, two may understand it completely; four may understand some sentences; ten understand a great many words, but are ignorant of so many, that they do not know the meaning of any one sentence.

Among the Brahmans and higher classes are some who understand the meaning, although they cannot read any character. This is the case with all the women, who understand the poetical language; for none of the female sex have been instructed to read. The other books in the poetical language that are in most common use, are Harischandra Lila, giving an account of a Raja named Harischandra, the Bhagwat of Lalach Halwai, mentioned in my account of Puraniya; and the Rasvihar, also mentioned in the same account. These three are more easily understood than the Tulasi Dasi, and even the vulgar understand a considerable part of Harischandra Lila. On this account probably it is that they are little esteemed.

The Prakrita, which is supposed to have been the language of Ravan, and of his subjects the monstrous cannibals of Langka, has been, I believe, considered as the same with the old dialect of Magadha. If that be really the case, it has been nearly banished from this part of its original seat; as the Pandit of the mission heard of one Brahman only who pursued its study. This person, Nityananda Jha, of the Mithila nation, resides at Bhagulpoor, and is esteemed as a man eminent for learning.

I have already mentioned, that Major Wilford considers the Pali of Ceylon and Ava as being the ancient dialect and character of Magadha. That language has undoubtedly the strongest affinity with the Hindu and Sangskrita, but the character has been totally lost. I have mentioned one small inscription (see plate 4, No. 8), which, I imagine, is a remnant of this ancient character; but every person in the district to whom I have shown it, alleges that he never before saw any such writing. In this district most modern inscriptions are in the Tirahuti character, but Sangskrita books are usually written in the Deva Nagri. Many people imagine that this is the proper character of the Sangskrita language, but that must be confined to some of the countries, where the Hindi language is spoken. In all other parts of India the Deva Nagri is very little used in writing Sangskrita; and even in Mithila, where the Hindi language prevails, a different character is used in science. I do not recollect any old inscription in which the Deva Nagri is used. All the characters of India, ancient and modern, have many things in common;

but I suspect that the Deva Nagri now in use is a very modern form of the Hindu character.

The state of Persian literature is here much the same as in Puraniya. On the whole, it must be observed, that the people of this district have rendered themselves fully as well qualified for transacting ordinary business as those of Puraniya; but the various offices are not so respectably filled. The men of business in this part, especially in the vicinity of Bhagulpoor, are fond of emigration, and most of those who have any intellect or industry, seem to have found their way to Calcutta, where some of their countrymen, having risen to eminence, afford them assistance. Those that remain, especially in Magadha, my native assistants have found uncommonly stupid. In Gaur and Mithila they are more acute. The education of the Zemindars and other landholders, has been fully as much neglected as in Puraniya. In the plan of education here, science, or any study that can enlarge the views, or improve the heart, has been most deplorably neglected; and the chief object seems to have been to lay in a stock of chicane, in which even the most stupid are very profound adepts.\* I have been often tempted to think that the stupidity was feigned, as a cloak for design; but my native assistants, who must be better judges than myself, are of a contrary opinion.

In the Appendix will be found the result of my inquiries respecting the extent of common education in this district, and in the first statistical table will be found a list of the schoolmasters or teachers. The science of the Arabs has not been so totally neglected as in Puraniya. Muhammed Fayek, of Bhagulpoor, is the head of a very respectable family, of which there are now 20 persons, all called Maulavis, and who all instruct pupils in Arabic. Their houses are called Mudursahs. The family has considerable endowments in land, and the Moulavis take no fees for instruction. Their pupils amount only to 40 young men. Muhammed Fayek is a person highly and justly respected by his countrymen, exceedingly affable and unaffected in his manners, obliging and communicative to strangers, and said to be well skilled in Arabic lore.

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\* Dr. Buchanan forgot that cunning was a vice naturally resulting from oppression amidst a feeble people.—ED.

In Suryagarha two brothers, Golam Mortuja and Golam Hoseyn, who have a large free estate, have endowed a Muddursah, and employ a Moulavi to instruct youth in Arabic and Persian literature. These two men affect an uncommon sanctity of manners, and avoid strangers; nor do I know what proficiency the person employed by them has made in his studies. Muhammed Hayat, of Bhajuya, near Gogri, has an endowment, and instructs seven youths in Arabic, Persian, and the Koran. He as usual takes no fee, and gives food to such of his pupils as choose to avail themselves of his liberality. Muhammed Fayek says, that none of the Kazis know Arabic or grammar, and that they have made very little progress in a knowledge of the law. In general they know a little of Persian literature; but this is the extent of their knowledge. Many as usual read the Koran, who do not understand a word of it. From the small number of professors who teach the three great sciences of the Hindus, that is, grammar, law, and metaphysics, and who amount to only 14, as will appear from the first statistical table, it will readily be perceived, that such learning is here at the lowest ebb. Three of the professors, I understand, are men distinguished among their countrymen. Besides the teachers, there are in the whole district about 50 persons called Pandits, who have been educated regularly in grammar and law, none of them have studied metaphysics; but most of them, if not all, have a smattering of Jyotish, so as to be able at least to calculate nativities and fortunate times. One of them constructs almanacks. Two have studied grammar, but in general this and the higher sciences have been entirely reserved to the sacred order.

The Brahmans in the western parts of the district have reserved to themselves the exclusive privileges of acting as astrologers, soothsayers, and wise men (Jyotish). In the eastern parts the Daivagnas of Bengal have made some intrusion on this valuable branch of science, which is here by far the most profitable. Among the 50 Pandits above mentioned, 40 may practise this art, and perhaps 15 more are practitioners, without having received an education that entitles them to the degree of Pandit. The common Dasakarma Brahmans can tell fortunate days for marriages, building houses, cultivating land, or such trifles. These

men can read, but do not understand any composition in Sangskrita. The Daivagnas of the east possess nearly a similar state of knowledge. Medicine is in rather a more creditable state than towards the east. About 270 Sakad-wipi Brahmans and a few Maithilas practise medicine. They in general know more or less of Sangskrita, and have some books treating on diseases and remedies, and written in that language. A great part is committed to memory, and a Slok or couplet is on all quoted as of divine authority to remove all doubts, and to astonish the multitude, who do not understand a word of it. At Bhagulpoor, Mungger, Rajmahal, and Pratapgunj, are men who have regular practice. In other parts they are hired as servants, and receive monthly wages, amounting to from 10 to 20 rupees, partly given in land. In this district I did not hear of any other practitioners of medicine, who possessed any thing like science, except eight men in Rajmahal, partly Brahmans, partly Kayasthas of Bengal, and partly Muhammedans. The Baidyas here have entirely relinquished the profession of medicine. The practitioners who exhibit medicine without having books, and in general without being able to read, are called by various names as in Puraniya. In the whole district there may be of such 600, some of whom are old women.

In the three chief towns are about 20 Jurrahs, who evacuate the water of hydrocele, treat sores, and draw blood both by cutting a vein, and by a kind of imperfect cupping. They are by birth barbers. The midwives are the women of the lowest castes, and merely cut the umbilical cord. The low people, who cast out devils, cure diseases and the bites of serpents, and oppose the influence of witchcraft by incantation, are exceedingly numerous. In some parts the same person pursues all branches of this profession, in others he confines himself entirely to some one. On the whole, there may be about 15 or 16 hundred persons who pretend to a knowledge of this mummary. The low castes, that eat pork and drink spirits, are supposed to have most skill in devils.

A branch of these wiseacres practise inoculation for the small pox, and with the utmost success. The number stated to belong to this district is about 30, but many practitioners come from adjacent districts. It is not here the custom for the inoculator to repeat prayers. Some Brahmans and makers

of garlands perform this office. I am informed, that of those who are seized with the spontaneous disease, not above one in twenty dies. The operation is managed exactly in the same manner as in the districts already surveyed, and is attended with the most complete success, very few indeed dying. This success and the general adoption of the practice render the introduction of the vaccine of very little importance.\* Mr. Hogg at Mungger, employed as subordinate vaccinator, cannot procure one person to bring a child without a bribe. It is true that bribe is not high, being one ana, or not quite twopence, or about a day's wages for a common labourer. One from this might be led to suppose, that parents here are little interested in their children when such a trifle can induce them to submit their offspring to a practice which they consider in any degree objectionable. I do not however see any other mark of such want of affection, on the contrary, the parents of this district seem fully as fond of their children as any where else, and to the amount of the bribe we must add the saving of the fee, that would be given to the inoculator.

In this district witchcraft (Jadu) is supposed to be exceedingly common. The people in the parts hitherto surveyed did not mention it so much as here; but whether from believing in it more or less I cannot say. My native assistants seem to think that they concealed their belief from an extraordinary fear; for not one of themselves seems to have the least doubt of the frequent practice or reality of the art. I suspect however, that in reality the people there are not so much afraid of the art as here; for they seemed much more communicative than the people of this district, and the only talk that I heard of it was in Kamrup, especially at Goyalpara, where the women were accused of using witchcraft for deluding their lovers. Much more desperate and unjustifiable views are here attributed to the witches, and occasion very great alarm to most parents. The witches (Dain) here also are supposed to be women, some young and some old. Their supposed practices would appear to be from pure malice. It is thought, whenever one of these witches sees a

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\* This is a mistaken idea; the continuance of inoculation propagates the disease, while vaccination tends to meliorate or to expel it.—Ed.

fine child, by means of imprecations addressed to some unknown gods, who are pleased with such worship, that she destroys its health, so that it pines away, and is deprived of reason, or dies.\* Unless the witch knows the real name of the child, her imprecations do no harm. On this account children are usually called by some nickname, and their proper one is concealed; and, as most parents think their children fine, almost every one is alarmed, when in play his children go out of sight. The children however are generally fortified by hanging on them something that is considered as a charm against spells.† At Bhagulpoor it was stated to me, that about 25 children are supposed annually to perish in that town from the malevolence of these witches. Some poor women, it may be suspected, are not unwilling to be considered as witches; for, after they acquire this character, parents are alarmed whenever they approach; and, after having concealed their children, give the Dain some present to induce her to go away.

RELIGION AND SECTS.—Calculating in the same manner as I did in Dinajpoor, and including the hill tribes among the Hindus, I reckon the Muhammedan population at 23 per cent. of the whole, or at about 458,000 persons. In the Appendix will be seen the result of the calculation for each division, and also the various proportions of Muhammedans and Hindus in different parts of the district.

THE MUHAMMEDANS.—The number of Moslems seems to be diminishing, although converts are occasionally made, because they have less encouragement and means of subsistence than formerly. Although by far the greatest landholder is a Moslem, he seems far from encouraging the faith, and perhaps regrets the change of his family religion; for in some parts of his estate, of considerable extent, there is scarcely one of the faithful. The same mutual adoption of each other's religious practices, that exists between the Moslems and Hindus of Puraniya, prevails in Bhagulpoor. The Kazi of Mungger and Kharakpoor had never heard of the Satya Pir. I suspect, therefore, that this object of worship, common to the Hindus and Moslems, is peculiar to Bengal; but

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\* This is the German story of the evil eye.—ED.

† In Africa these charms or spells are used by all classes.—ED.



at Mungger the Hindus pray occasionally to Satya-Narayan, repeating verses in the dialect of Bengal. The Kazis seem to have no regular mode of conducting business. In some places they have regular deputies, called Nayebs or Mollas, who officiate for certain portions of their respective jurisdictions. In other cases they depute a person for each occasion, when personal attendance would be inconvenient. They do not in general, at least in Kharakpoor, consult the people in the appointment of Mollas, and there are no people of this description except the few who act as their deputies. I have not learned that any person in this district acts as a Mirmahlut. The lower excluded castes have Mehturs or Serdars, who settle the business of their associates in public assembly.

The office of the Pirzadahs, who admit people into the order of Murids, is somewhat like the confirmation of the church, or the Upades of Hindus, and seems more respected here than in the districts hitherto surveyed, although the number of those who profess themselves Murids is by no means greater. Considerable establishments have been granted to the families who enjoy the office, which is hereditary, and they seem to perform their office for many people who do not reside. I heard of no persons called Khondkars. I suspect that it is a term used in Bengal for those who are here called Pirzadahs. All religious mendicants, Hindu and Moslem, here as well as in Puraniya, are called Fakirs and Padres; but I shall confine the term Fakir to those of the faith in Muhammed. The Fakirs in this district are much on the same footing as in Puraniya, but are not so numerous, they may amount to between 550 and 600 families, mostly married; but the country is overwhelmed with vagrants of this name, most of whom want women, and are Benawas. The residents seem to be in general less amply provided than in Puraniya. There were four great founders of the order of Fakir, and every person of this profession belongs to the sect of some one of these four doctors. These four sects have again branched out into 14 orders, and every Fakir belongs also to some one of these; but the orders again have branched out almost *ad infinitum*, and the ignorant are in general only acquainted with the subordinate rule to which they pretend to belong. A great many of the Fakirs are here called Arzan-shahi, from a holy man of Patna, who founded a rule. After

having resided some time at Patna or Azimabad he went to Wordi, and on that account many of his disciples are called Shahar-Wordi Fakirs. A disciple of this saint, named Mortuja Shah Anund, settled at Sutigram in the division of Pratapgunj, and founded a new rule of Fakirs, called Mortuja Shahi, after his name. These two are the most common sects here, but there are also some Julali and Madaris.

The Benawas are divided into two classes, Gudriposh and Benawas proper. The Gudriposh dress in rags sown together; and derive their origin from a certain Benawa named Gadanarayan, who added this extravagance to the rules of severity, which the common Benawas observe. They have no women, and beg for their daily subsistence, preserving nothing for to-morrow, and sleeping under trees, or accidental shelter. The Madaris should not keep women, dress in dark coloured clothes covered with ashes, and do not shave their heads nor beards. Muhammed Fayek says, that Budiuddin, who founded this order, did not live at Mudinah, but at Mukunpoor near Lakhnau. The Julalis ought to cover themselves with ashes, but do not seem to be excluded from women. They eat serpents and centipedes, and burn their bodies with balls made of charcoal, and torment themselves with iron spikes. The tomb of Julal of Bukhari, their founder, is at Kuriangch in the Sikh country.

The people here seem more attentive to prayer and ablution than even in Puraniya. In Mungger the Kazi says, that from one-fifth to one-fourth of the whole perform these ceremonies at the five stated periods, and many more once or twice a day; but I believe, that in other parts of the district there is a much greater relaxation. Pilgrimage seems far from being fashionable; but I heard of two persons who have been at Mecca. I met several who pretended to be on the way, and on the strength of their intentions levied contributions from the charitable. I suspect, however, that they never meant to leave the banks of the Ganges. Many people, as I have said, are diligent readers of the Koran. The fasts are far from being regularly observed, and are neglected much, as in Puraniya; and many of the faithful drink spirituous liquors. The Mohurram is observed by both Moslems and Hindus, much as in Puraniya; but only one of the latter, the Sultangunj Rani, makes a pageant; many send offerings.

The number of Shiyas is very inconsiderable; but either their zeal, or the intolerance of the Sunnis this year, during the celebration of the Mohurram, was near occasioning an open rupture. On this occasion the Shiyas curse Omur, Abubukur and Osman, whom the Sunnis regard as saints, and are of course exceedingly enraged, although it would appear that the Shiyas perform their curses in places of worship peculiar to themselves, to which the Sunnis have no occasion to go. This year the Mofti of the court of circuit was a Sunni; and, it is said, procured an order from the magistrate to prevent the Shiyas from following their usual scurrilous practice. This gave great offence, and a tumult was likely to have ensued, had not a battalion of sepoy's happened to march into the town. They were delayed a day, which kept every thing quiet. Concubines (Nekahs) are always united to their keepers by a religious ceremony, and their children are entitled to a share, even if there are children by a virgin spouse. The children by slave girls have no claim, if there are any legitimate children or near kindred. The doctrine of caste is fully more extended among the Moslems here than in Puraniya.

The Saiuds are very numerous, especially at Bhaghulpoor, and in Suryagarha. At Rajmahal the chief family of Zemindars, who before their conversion were Brahmans, contend that on that account they are entitled to be called Saiuds, and the influence which the family possesses, has on the spot produced an acquiescence; but in other parts none are called Saiuds who are not supposed to be descended of the prophet. It is thought, that in the whole district there may be 2300 families of this kind. The Moguls are less numerous, amounting only to about 900 or 1000 families, about one-half of whom are settled in the capital. The Pathans amount, it is supposed, to about 3400 families, of whom a large portion is also settled in the capital. These three tribes form a kind of gentry, none of whom chooses to apply his hand to labour; but they do not enjoy the high privileges with which they have been indulged in Puraniya. The bulk of the Moslems, who here also are called Sheykhs, chiefly employ themselves in agriculture. Of the tradesmen, who in this district are excluded from intermarriages with the Sheykhs, I heard the following mentioned. Momin-Jolahas or weavers, about 4300 families. Tape weavers and

string knitters (Patwars) 140 houses; and three weavers of cotton carpets are also excluded. Cotton cleaners (Dhuniyas), 1680 families.\* Those who prepare and retail curds 100 houses, confined to the division of Faye-zullahgunj. Taylors about 330 families. Washermen about 108 families, besides five families that scour shawls. Barbers about 45 families. To these belong also 20 families called Jurrah, who are a kind of surgeon-barbers, that have been already described. Butchers, including those who kill both beef and mutton, about 45 houses. Gelders (Abdal), 35 houses. Horse shoers, here called Nalbund, two families. Cutters, 28 families, are the only workers in the metals that are excluded.

One family which makes ornaments of lac; 25 families who make ornaments of glass, and about seven families of turners are excluded. Painters of two kinds, Patwar and Rungsaz, are generally excluded, there being 13 families of the former, and 20 of the latter; yet I found even a descendant of the prophet employed in this occupation, and not disgraced. Ninety-six families of paper-makers; and 20 families of those, who prepare tubes for smoking tobacco, are excluded. Eighty-seven families of dyers are excluded. A good many Beldars or pioneers have been converted, and still keep a separate caste. I heard of about 150 houses.

In this district no Muhammedans are fishermen; but there are about 280 families who retail fish, and are called Mahi-furosh or Pajari, and are excluded. Twenty families are excluded, because they live by catching birds and managing hawks, and are called Mirshekars. Sixty-six families of Mukeri are excluded on account of being petty dealers in grain, and about 1450 families (Kungjra), because they retail greens. Five families, that retail the charcoal balls used in smoking tobacco (Tikiya-furosh), about 280 families, who retail tobacco prepared for being smoked, and 47 Bakhos and 80 Besatis, who retail spices, are also excluded. Eighty-six families of Bhathiyaras, who keep inns (Sarays) are excluded from communion, and also about 16 families of bakers.

The Moslem bards (Bhat) are excluded, and amount to 17 families. The Damphalis, who are excluded, amount to above 140 families. Here they not only play on the Damph

and beg, but hawk trinkets and spices. Eleven companies of Hijras or eunuchs, may be placed in the same class, as they are mendicants. Twenty houses of Dhotis are musicians, but do not beg.

There are 32 families of Bhangr, whom I took in Puraniya to have been jugglers; but I am told, that they are mendicant wits, who amuse the people by making wry faces and gestures, and singing ridiculous songs. Four houses of Badiyas play tricks with serpents, and no less than 63 families of Chambas tame monkees and bears for the amusement of the public, and do not torment themselves as in some other parts. The Helas are a low class of Moslems, the men of which here keep dogs, and the women are midwives to the rich. I heard of only four families. The accounts of this caste that I received in Puraniya were rather contradictory, and no one here speaks with certainty concerning people considered so vile. A great many of the female attendants, that European ladies can procure in India, are said to be of this class. The Muhammedan women of loose character are excluded from communion, and amount to about 112 houses. Besides these, 10 families of a higher class of dancers and singers, called Piranis, are to be found at Rajmahal, where they pretend to exhibit before persons of high rank only.

THE HINDUS.—I shall first, as formerly, give an account of the tribes and castes, and then conclude with some general observations. In enumerating the castes, I shall in general follow the order of rank which each holds in the western part of the district, formerly a part of the province of Behar; and this order differs much from that observed in Bengal; for the sake of connection, however, I shall treat of the analogous tribes of Bengal in the same order, although in the part of the district, which belonged to Bengal, the order of precedence is very different, as I have had occasion to mention in my account of Puraniya, to which I shall refer, whenever I have nothing new to offer on any subject.

To begin with the sacred order, Major Wilford says, (*Asiatic Researches*, vol. 9, page 74), that all Brahmans are of two kinds, Kanyakubja and Sakals, who came from Sakadwip. With respect to the former he also says (page 92), that the Brahmans acknowledge that they are not natives of India, but came from the north-west, and that Kanoj was

their first settlement. The Pandit of the survey has procured a book, called Rudrajamal, supposed to be composed by Siva, and published by Parasuram, who delivered it to the Munis or sages of old; but the man by whom it was made known to sinners is not known. In this book it is stated, that the Brahmans came from Sakadwip to Jambudwip, and after some generations went to Kanyakubja. After some generations again they dispersed over different countries, as the Dakshin, Angga, Bangga, Kalingga, Kamrup, Odra, Bata, Magadha, Barandra, Chola, Swarnagrama, China, Karnata, Saka, and Barbara, according as they were favoured by different Rajas. This book mentions no other Brahmans. I am also informed by Gauri Datta, a Saryuriya Brahman of Kanoj, the most intelligent man whom I could procure to assist me in making this account, that in the Vishnu Puran it is mentioned, that all Brahmans were originally of Kanoj, and were afterwards divided into ten nations, according to the countries in which they settled. Major Wilford also has been informed, that the colony from Sakadwip first settled in the country called Kikat or South Behar, to which they communicated the name Magadha, from their ancestor Maga. Nor does this contradict the report of the Rudra Jamal; as the descendants of those, who remained behind in Kikat, might retain the original name of Magas or Sakadwipis, while the more successful colony of Kanyakubja is considered as the common source of the sacred order of this miserable world (Jambudwip). What country may be meant by Saka, I shall not take upon myself to say. From its being surrounded in Hindu legend by a sea of milk, I suspect that it is imaginary; but Major Wilford seems to think that he has been able to trace it in the west. In the country occupied by the Magas was first taught the doctrines of the Buddhs, which has been spread even to China, and in Ceylon, Ava, Siam, and Thibet has been accompanied by the original legends and written characters of the Gangetic plains; but I cannot agree with Major Wilford in supposing, that the inhabitants of these countries are descended from the Magas; in my opinion the countenance of the rude tribes of both countries, as well as of the more polished and intermixed nations, mark them clearly as distinct races of the human species. In the following account of the sacred order

I shall first mention the Brahmans of the ten nations derived from Kanyakubjas as the most important, and then return to the Magas and Sakals.

The extreme difficulty of coming to any fixed or rational conjecture concerning the transactions of a people who have no history, may be well exemplified in the opinions which I have given concerning the original seat of the nation of Brahmans called Gaur. In my account of Dinajpoor, I supposed it to have been in the west of India; but, when I reached Puraniya, a tradition current in that country induced me to change my opinion. Major Wilford however says, that the term Gaur in Hindu books is never applied to Bengal as a province, but to the city alone, as being the abode of the deity Gauri, whose temples I have mentioned in my account of that city; and he farther says, that the proper Gaur (Gauda as he writes it) is on the banks of the Narbada in Malava. In this district, at any rate, about 36 families only of Gaur Brahmans have settled; but 25 of them reside at Rajmahal, in what is now reckoned Gaur. They are of the sect of Vishnu, and their Guru resides in Brindaban, being of the Radhaballabhi school, which implies their worshipping Vishnu under the form of Krishna. Most of them here, as well as in Puraniya, are men of the world, chiefly merchants and shopkeepers; but five or six of them have images, and act as Gurus and Purohits for several tribes from the west of India.

The Maithilas are by far the most numerous of the ten nations of Brahmans, and amount to between 5 and 6000 families. About a tenth part of these have taken up their abode in the part of this district, which belongs to the province of Bengal. The remainder reside in the western and southern parts of the district, and seem to have acquired as complete an ascendancy in Magadha as they have in Mithila. In the two countries they follow very nearly the same customs which I have described in the account of Puraniya. The only difference which I perceive is, that the Brahmans, who officiate in temples, are here usually called Pandas, but this term is also bestowed on priests of the lower tribes. In the south it seems confined to the Sudras, who are dedicated to the worship of Siva.

Of the five sacred tribes introduced from Kanyakubja by

the Hindu kings of Bengal there may be 500 families, of whom nine-tenths at least belong to the Rarhi division, and not a tenth to Barandra; for Bollal Sen assigned all the portion of this district that belonged to the province of Bengal to the Rarhi Brahmans. Almost a half of this division however, has settled in the part of the district which belongs to the Mogul province of Behar. Besides these, there are from 2 to 300 families, who, by officiating for low tribes, have in the south-east part of the district degraded themselves to the rank of Varnas; and some who officiate for the Kaibartas, and are called Patits, or sinners. Only three houses of the Baidik Brahmans of Bengal are to be found in the whole district. Of the Brahmans, who retain the title of Kanyakubja, there are between 13 and 1,400 houses. Some of them call themselves merely Kanyakubjas; but others distinguish themselves by the subordinate and inferior denominations of Antarbediya, Saryuriya and Sanoriya. They go in carts drawn by oxen, as in Puraniya; but few only of them are of the sect of Saiva, and they are very much divided among the different sects that now prevail. A great part of them have lands either free or rented, by the cultivation of which they chiefly live. Some of them give religious instruction to their own tribe to Kshatris, Rajputs and Kayasthas; but the Maithilas perform most of the ceremonies, which here as well as in Puraniya is the most profitable part of the sacred office.

The Saraswat nation of Brahmans are from 20 to 30 families, who live chiefly by officiating in the ceremonies of the high ranks from the west of India. There is only one family of the Utkal nation. Besides the Maithila and Kanyakubja Brahmans already mentioned, from 4 to 500 families of the sacred order have been degraded in the western parts of the district by acting as priests for the low castes; and between 2 and 300 by performing the office of Kantha, or Mahapatra, or Agradani; but some of these last are of the five tribes of Bengal. In general the nation, to which these degraded Brahmans belong is not known, and they are called by their office, or by the name of the tribe for which they officiate. In this district none of the southern nations of Brahmans (*Pangcha Dravir*) have settled.

These are all the Brahmans that belong to the 10 nations, into which the sacred order is usually divided; but their is a



kind of Brahman called Mathura, from the name of a city in Brindaban. They pretend, that they sprung from the sweat of Krishna. They live in what is called a pure manner, and confine themselves to officiate as Gurus and Purohits for pure tribes, or to cultivate land, which they rent or enjoy free. One of them has some science; but concerning this tribe I have not yet learned anything sufficient to enable me to enter into a detail. Four families of Brahmans pretend that their ancestors were brought from Kraungchadwip by Dasarath, the father of Ram, in order to enable him to have a child. This Kraungchadwip is surrounded by a sea of melted butter, and is therefore far beyond the extent of my geographical knowledge; nor have I anything to relate concerning these Brahmans, except that they instruct many of those who worship Ram, and are considered skilful in astrology.

In my account of Puraniya, and in the foregoing pages, I have given some account of the Sakadwipi colony; they are alleged to be the original stock of almost the whole Brahmans; but it is only those who remained behind in Magadha, when their brethren removed to Kanyakubja, that retain the name Sakadwipi. Of these there are in this district from 2 to 300 families. They mostly practise medicine, by which they probably recommended themselves, when they arrived from their original country; and most of them understand the books on their science, which are to be found in the Sangskrita language. In search of employment many of them go abroad to other districts, and a few have studied Persian, and entered into the management of worldly affairs. They act as Gurus, or religious instructors for themselves; but hire Maithilas to perform their ceremonies. The people of the sect of Saur, who worship the sun, give much of their offerings to the Sakals, who are considered as peculiar favourites of the great luminary; but most of the Sakals are of the Sakti sect. They are divided into 18 families, and a man cannot marry a woman of the same family with himself. They say, that in Sakadwipi there were four classes of men: First, Magas, from whom the Brahmans are descended. Secondly, Magadhas, who were the military tribe of the country. Thirdly, Manasas, who were the merchants; and fourthly, Mandagas, who were the labourers; but none of the three lower tribes came with the Magas from their original country.

They still acknowledge the name of Magas. It is said, that an account of this tribe is to be found in the Samba-Puran, attributed to Vyas.

These Magas must by no means be confounded with the Magahis, Bhungihar or Zemindar Brahmans, yet these are undoubtedly the old subjects of the kings of Magadha, and are admitted by all to belong to the sacred order, although they never perform any of its peculiar duties. In my account of Puraniya I have given some account of this race, and when it was composed, I thought, that in this district I should have had an opportunity of clearing up many points, concerning which I found myself dubious. In this however, I have been in a great measure deceived; for, although there are in the district at least 10,000 families of this tribe, they are uncommonly shy, and the very mention of the terms Bhungihar or Magahi, especially of the latter, puts them in a rage. In Major Wilford's account of the Anugangam, or country watered by the Ganges, I perceive a reason that may be assigned for their unwillingness to be called by their national name. The Pauraniks, says this learned officer, (*Asiatic Researches*, vol. 9, p. 62), allege, that "Ripungjay drove away the Brahmans; and raised to the priesthood men of the lowest tribes, Kaibartas boatmen and fishermen, Patus, Pulindas, and Madrakas; but these Brahmans were no better than Mlechchhas or impure and base-born men. These boatmen and fishermen, being used to live upon fish, would never give up their favourite food when raised to the priesthood, and their descendants the Bengal Brahmans live upon fish even to this day. The same circumstance is mentioned in the Vishnu Puran." The comment on the Brahmans of Bengal has probably been written by some person who was not aware, that of all the five northern nations of Brahmans, Gaur, Utkal, Kanyakubja, Maithila and Saraswat, it is only the first that are excluded from eating fish, although many of all the nations reject this food from an idea of purity. The books to which the Major alludes, have therefore in all probability been written in the south of India. The Brahmans of Bengal cede to none, I believe, in either purity or learning; and this passage in the Purans seems in reality to be aimed at the introduction of the sect of Buddh, to which the later Hindu princes on the banks of the Ganges belonged. As the

doctrines of the Purans prevailed, and when this story had become current, the Brahmans of Magadha became ashamed of their country. The reason why they seem to be offended at the Hindu term Bhungiya, and to prefer the Persian synonym Zemindar, is, that in this district there is an exceedingly low tribe called Bhungiya, with whom they are afraid of being confounded. This Ripungjay Raja, who lived about the seventh or eighth century of the Christian era, is also said to have "exterminated the remnants of the Kshatri tribe, and to have filled their places with people of the lowest classes." Part of these I take to be the ancestors of the Bhungiyas, with whom this tribe of Brahmans is afraid of being confounded; but the Kshatriyas of Magadha had previously been destroyed, or driven out of the dominions of Mahananda king of India, who flourished in the fifth century before the birth of Christ, (*Asiatic Researches*, vol. 9, p. 37), and this prince placed Sudras in the room of these nobles or soldiers. I am inclined to suspect, that the Zemindar Brahmans are the descendants of those Sudras, admitted by this prince into the military order; for their manners are entirely similar to those of the other tribes of military cultivators; and, as I have said in my account of Puraniya, they seem to be the descendants of the Brachmani of Pliny. Brahman, it must be observed in the languages of India, is not exclusively applied to the order of priesthood; but as I have said in my account of the religion of the Burmas, is applied to the new inhabitants of any land. Accordingly we find in Mr. Joinville's account of Ceylon, many colonies of Brahmans entering that island; but these Brahmans, instead of being priests, would appear to be industrious weavers; and it must be observed, that the title of the Brahman priesthood in their original country is said to have been *Maga*; so that it was probably on their arrival in India as a new colony, that they received the name Brahman.

Great persons among these Brahmans are fond of being called *Raja*, those who have estates assume the title of *Zemindar*, and those who are poor distinguish themselves by the name of the tribe to which they belong. These tribes are numerous, and somewhat resemble the old clans of Scotland, as all the members are supposed to have a common descent in the male line; but they seem to have little attach-

ment or respect for their chiefs. The nation is said to extend on both sides of the Ganges from Benares to the frontier of Bengal. In this space I have heard of 19 tribes.

Before the time of Siwai Singha they acknowledge, that they all ploughed and worked oxen with their own hands; but those in Mithila having since been threatened with being reduced to the rank of impurity, should they persist in this iniquity, have given it up. The poor, however, even there do all other kind of work about their farms, and in Magadha they continue to hold the plough. Besides these common Brahmans of Magadha, are between one and two hundred families, who call themselves Magadha Desi Srotriya Brahmans, who live very pure, and act as Gurus and Purohits for pure castes; but, so far as I could learn, have no learning; nor have I been able to hear any thing of their history. They have no connection with the Srotriyas of Bengal, but are considered as much higher than the military and agricultural tribes of Magahi Brahmans.

In the eastern corner of the district are about 40 families of Daivagnas, who are hereditary astronomers, and are considered in rank as next to the Brahmans. In the other parts of the district the sacred order has reserved to itself this branch of science. Next in rank to the astrologers are between five and six hundred bards of the Hindu religion, who are called Brahma Bhat. Most of them have small endowments, and they all have some land, that they rent from Zemindars, or hold from government. They are all employed at funerals and marriages; or, if they are very poor, are open beggars on all public occasions. In common, men of reputation get from one to five rupees, but great persons often give 20 rupees. Bhats of inferior abilities get from one to 15 anas. If not paid according to their expectation, they are apt to be very abusive; but of late people of rank have begun to resent the liberties, which the bards were wont to take. Notwithstanding the military tribe has been twice at least expelled from this country, there are about 80 families scattered through the district, who call themselves Kshatris; but there is great reason to think, that these are in reality Khattris from the west of India.

The Rajputs in this district are exactly on the same footing as in Puraniya; that is, in the parts, which belonged to the

province of Bengal, they are considered as inferior to the scribes, physicians, and merchants; but in Behar, they are considered as next in rank to the bards, and are allowed to be Kshatriyas or members of the pure military tribe. In this district are between five and six thousand families. Some of them hold the plough with their own hand; but these are disgraced, and the others will not intermarry with their families. There is besides a tribe of Rajputs called Baksariya from Baksar (Buxar R.), of whom about 500 families have settled in this district. Wherever any considerable number of these Baksariyas live in one place, it is called Katgar. They are considered as peculiarly warlike, and bold, and plough with their own hand; but, owing to their violence, their purity is not disputed. The customs of the Rajputs here are the same as in Puraniya.

The Kshetauris pretend to be of the military rank, and having been long in possession of a great part of the district, their claim is so far in general admitted, that in many parts they are placed next in rank to the Rajputs. I have mentioned the remains, which their chiefs have left. In the western end of the district the Kshetauris have been in a great measure exterminated; but there still remain, in the middle parts chiefly, above 3000 families, and there are still in the division of Bangka four persons, who assume the dignity of Raja, and take their titles from Manihari, Hangrwe, Barkop and Parsanda. An account of their genealogy and condition will be afterwards given. The Kshetauris pretend, that, when Parasuram destroyed the military tribe of India, two of them fled to Viswakarma the god of artists for protection. Parasuram, coming up, was desirous of killing them, but Viswakarma said, these are not Kshatris (fencibles), but Kshetauris, (farmers), on which Parasuram demanded proof by their handling the plough, which in order to save their lives these degenerate persons consented to do. Their descendants have ever since been called Kshetauris, and are considered as somewhat degraded. The tribe, after this, resided for many ages in the vicinity of Delhi; but, on the Muhammedan conquest of that city, they retired to Chhota Nagpoor and Kharakpoor, both of which, for some time, almost entirely belonged to them. No such tribe I am told remains near Delhi; but the Kshetauri, Koeri and Dhanggar

are still the principal inhabitants of Chhota Nagpoor, where, I am informed, the two latter, and I suspect, the former do not speak the Hindi language, and the Dhanggar are still impure, and perhaps infidels (Mlechchhas). Another tradition concerning the Kshetauris is, that they were originally of the low tribe of fishermen called Chandal, and were raised to importance by one of them, who was a favourite of Ram. I have little doubt, that in fact, whether infidel mountaineers or vile fishermen, they were one of the tribes raised to military rank by Raja Rípfungjay, and that on their becoming followers of the Brahmans, these priests invented a Pauranik legend. They have now entirely adopted the manners of the Rajputs, and as many, as can afford, will not labour their fields with their own hands; but those, who hold the plough, are not disgraced. Their Gurus are partly Maithila, and Rarhi Brahmans, partly Dasnami Sannyasis. The Brahmans of both kinds perform their ceremonies. The affairs of caste are settled in assemblies of respectable people, nor have they any hereditary chiefs.

Of the medical tribe of Bengal (Baidyas) there are only between twenty and thirty families, all settled in the parts of the district that belonged to the province of Bengal; where they are allowed to be higher than the scribes. In Behar the pen-men (Kayeth or Kayastha) are placed next to the Kshetauris, and by the Brahmans are considered as bastards; to whom the rank of Sudras has been given; and in general they do not presume to be angry at this decision, which in Bengal would be highly offensive. Some of them however pretend, that they did not proceed from the feet of Brahma, like Sudras; but that three of them were made from the dust, with which, during the fatigues of creation, the whole person (Kaya) of the God was covered. One of these men of dust, named Cihitra Sen, was writer to Ram or Bacchus, and from him are descended all the scribes on earth. One of the remaining two was given to the judge of the infernal regions, and the other to the chief of serpents.

[Dr. Buchanan gives a long account of the various castes or trades,—a description of which will be found in Puraniya, Behar, &c.—Ed.]

The mountain tribes are, I believe, the descendants of the original inhabitants of the country, very little, if at all, mixed

with foreign colonies. Their features and complexion resemble those of all the rude tribes, that I have seen on the hills from the Ganges to Malabar, that is on the Vindhya mountains. Their noses are seldom arched, and are rather thick at the points, owing to their nostrils being generally circular; but they are not so diminutive as the noses of the Tartar nations, nor flattened like those of the African Negro. Their faces are oval, and not shaped like a lozenge, as those of the Chinese are. Their lips are full, but not at all like those of the Negro; on the contrary, their mouths in general are very well formed. Their eyes, instead of being hid in fat, and placed obliquely, like those of the Chinese, are exactly like those of Europeans. In fact, considering that their women are very hard wrought, they are far from having harsh features.

The most remarkable of these mountaineers is the tribe, which occupies the northern part of the Rajmahal hills. To the map and topography I refer for an account of the territory, which they possess, and for an account of their manners I refer to a paper by Lieutenant Thomas Shaw contained in the fourth volume of the Asiatic Researches, to which I have very little occasion to make any additions. The orthography, which I have adopted, differs from that employed by the above mentioned intelligent officer, not from any idea, that his is incorrect; but for the sake of uniformity. In the first visit, that I made to their villages, on the hill Gadaitunggi, east from Udhwanala, I went from the bank of the Ganges in a palanquin, which I left at the foot of the hill, and in order to give no alarm ascended with only two servants, and a guide who was a mountaineer in the service of the post office. Not one of us had even a stick in his hand. As we ascended, we were joined by a young man, son of the chief of the village, who, as I passed, came from a farm on the plains, which his father rents. The young man was intelligent, and not at all rude; but showed no disposition to give us a cordial reception. When we came to the village, all the men remained in their houses, and most of them shut their doors. The women and children came out to look at me, but declined conversation, although the young man said, that all the women could speak the low country dialect. I went towards two or three groups; but, as I approached, they all retired, except one young woman, who had a good deal of reason to be satisfied

with her appearance. As I approached, she stood with a becoming, but modest assurance; but she would not speak. I now determined to put the young chief's hospitality to a full trial, and sat down on a stone by his father's door, complaining of the heat, and of thirst; but he neither offered to take me into the house, nor to give me water.

Another attempt on the hill Chaundi, west from Rajmahal, convinced me, that these people do not possess the virtue of hospitality. I soon after indeed found out the means of making them assume its appearance. I had passed along a great part of their frontier, without having been able to procure any intercourse, sufficient to give me a knowledge of their manners; and I therefore determined to give a feast, which I was told would answer the purpose. At Ganggaprasad I invited those of the neighbouring hills, and gave them a dinner and drink. At Paingti I gave another entertainment. Afterwards, so long as I continued in their neighbourhood, I was completely worried with their attentions. Flocks poured in with little presents of honey, and eager to give me information; and, when I visited any of their villages, I found every door open. Our intercourse, however, always terminated in a solicitation for drink, a most extravagant fondness for which seems to be the greatest foible of the tribe. They are, however good natured in their cups; and one of them, who was brandishing a hatchet, as he was dancing amidst a staggering crowd, readily gave it up to me, and seemed sensible of the propriety of my taking it. A custom, which they observe in their dances, clearly marks their insatiable desire for liquor. The chief person goes round the men and women of the party, as they dance; and in their turns pours from a pitcher into the mouth of each, what he thinks a reasonable quantity. When he has gone the round, another person takes the pitcher, and helps the chief. No one helps himself to the pitcher, sensible that so long as a drop remained, he could not remove it from his lips.

They are fully as well dressed and cleanly as the neighbouring peasantry, and their women have a greater quantity of ornaments, and these more valuable. Their houses are more roomy and airy, and fully more clean. The principal ornament of their huts consists of the skulls of the tigers, deer, hogs and porcupines, which the owner has slain, and



on the number of these trophies he prides himself with all the exaltation of a keen sportsman. Their chief art is the preparation of what they call Pachoi, that is fermented grain, from which they prepare their liquor, and which differs considerably from the operation of malting. The grain, either maize or janera (*Holcus Sorghum*) is boiled, and spread out on a mat to cool. It is then mixed with the ferment of vegetables called Bakar, which I have described in my account of Ronggopoor, and kept in a large earthen pot for eight or nine days.\* Warm water may at any time be added to this, and in a few hours it ferments, and is ready for being drank. This liquor they call Pachoitadi. Some of them can distil it, and prepare Patkatadi. In the southern parts of their hills this tribe possess many oxen and cows; but in the northern parts they have only domestic swine and goats, as mentioned by Mr. Shaw. A few of them can read and write the Nagri character.

These people call themselves Muler; but they admit that this name is also applicable to the southern tribe of mountaineers, whose manners and language are very different, and with whom they cannot eat nor intermarry, nor could I hear of any tradition concerning the two tribes having ever had similar customs; but probably their customs at no very remote time were the same, their traditions going back to no distant periods. They have, for instance, no tradition concerning the introduction of maize, which is now their principal food; and its introduction must have been the greatest improvement on their condition that has ever taken place, and has occasioned the addition of a new god to their worship. All other tribes they call Galer; but among these are comprehended several tribes that shall be afterwards mentioned, with whom they sometimes intermarry, many of whom retain their language, and all eat in common, and join in the repast on beef. The Suzawul or native officer who superintends their conduct estimates the number of this tribe at 80,000 houses.

On a most careful inquiry I learned that the territory of this tribe is reckoned to contain 589 villages, and that though some few of these contain from 30 to 50 houses, the average cannot be taken at above 12 houses and 60 people for each, giving in all 7068 houses, and 35,340 people. In the whole

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\* See Vol. III. book II.

of their territory I have allowed 38,000 people, the difference being on account of the Ghatwals and their dependents residing among the hills. This tribe openly boasts in its impurities, and glories in eating beef and drinking beer, as if it were composed of Englishmen; but all the other tribes have become more or less ashamed of committing such enormities, and endeavour to shun or conceal part of their impurity. This produces a great difficulty in tracing their pedigree; for the various degrees of command which in different parts the people of the same tribe have obtained over their unruly appetites has given rise to innumerable divisions; and at very little distances totally different customs prevail.

The Nat are usually called Pahariya (hill) Nat, in order to distinguish them from those who amuse the people by performing tricks. The northern tribe consider their southern neighbours as brethren, and call them Maler the name which they give themselves; but the southern tribe, shocked at the impurity of the others, deny this consanguinity, and most usually call the northern tribe Chet, while they assume to themselves the denomination of Mal or Mar, which however is probably a word of the same derivation with Maler. The Mal however divide themselves into three tribes, Kumarpali, Dangrpali, and Marpali; and they often call the northern mountaineers Sumarpali: thus, as it were, acknowledging a common origin, which I have little doubt is the fact. The manners and language of the three southern Pali are the same, and they speak a very impure dialect of the Bengalese. The three Pali were originally local distinctions, but now all live intermixed, have exactly the same customs and language, and intermarry; but there are five real hereditary distinctions, which descend in the male line. The highest rank consists of the Rajas or chiefs and their descendants, all of whom are called Singhas or Lions. Next to these are certain families that were at one time rich, and are called Grihi. They assisted their poorer brethren with loans, and seem to have been a kind of bankers, like the Vaisyas of the Hindus. They never seem to have held any office in the state. The third in rank were the Majhis or chiefs of villages, and none but persons of this rank were ever permitted to hold this office. The persons of the Aheri or fourth class were by birth hunters; and at first, in all probability, were the lower

and labouring class, like the Sudras of the Hindus; for what is now considered as the lowest and fifth class is composed of the Naiyas, who are allowed to have originally been the priests, but have been totally discarded from that office. It must be observed, however, that by the neighbouring Hindus the term Naiya is usually given to the whole tribe. From among the persons of a certain family he appointed a Majhi for each village; but after his appointment the Majhi could not be dismissed without the consent of an assembly of the whole tribe, from which no one was excluded. The Raja appointed also a Foujdar to command in predatory excursions, and could dismiss him at pleasure. He also appointed a Dewan. Each person gave annually to his Majhi some share of his crop, a goat, a pot of honey, and a bundle of rope; and the Majhis again gave to the Raja a share of what they thus procured. This custom continues; but the Foujdar is no longer necessary, and the Majhis are considered as hereditary by right of primogeniture. The land seems to be the property of the cultivators. On the hills and swelling land the field is cultivated two years, and then lies fallow for five or six; but a man may prevent any other from cultivating his fallow land. Every family has some land, but some have not enough, and these at spare time work for wages. There are no slaves.

A field thus cultivated after a fallow is called a Vari, and in the hills is not ploughed; but in the low country it is often ploughed, and there some of the Mal possess rice lands, that every year are regularly cultivated. Their huts are usually contiguous to the Vari, and near them they have small gardens, in which they rear plantains, capsicum, and green vegetables. On the hills the Vari is not ploughed nor hoed. The men cut the trees and burn them, and the women sow the seed. On the first year they scatter over the surface seed of the kinds of millet called Kheri and Kangni; and, with a stick pointed with iron, form small holes, in which they drop seeds of the maize, of janera, and of a pulse called Bora or Kalai. In the second year they plant only the maize and janera. In the Varis on the low lands, which are ploughed, they raise the same articles as on the hills with the addition of rape-seed and sesamum. They collect wild yams, and besides cows and oxen, for milk and labour, they rear swine

goats, fowls and pigeons for eating. They ferment both maize and janera, and usually drink the liquor without distillation; but some are acquainted with this art. They make no cloth, and cannot work in iron. They have most of the instruments of music commonly used in the low country, and have adopted inoculation for the small pox. Although their progress in agriculture is greater than that of their northern neighbours, their huts are much more wretched and dirty, their clothing is more scanty, and their women are less cleanly and worse provided with ornaments. This, I presume, is owing to a consciousness of impurity and sense of degradation which has taken away the pride that induces men to labour for distinction. Their deities have neither images nor temples. The bodies of the dead are burned on the same day that they die; and, if the person has been of rank, a Brahman performs ceremonies. The kindred mourn five days, and then give a feast.

Among the rich, who have Hindu priests, premature marriages are in use; but the poor often wait until the girl is 20 years old; her inclination however is never consulted. Her parents always receive some money from the bridegroom, but not enough to defray their expense. A man may marry several wives. A widow may live as a concubine (Samodh) without any religious ceremony, but the connection is permanent. Adultresses are turned away, but may become concubines. If an unmarried woman prove with child, her paramour must marry her. The eldest son at present succeeds to all dignities and land, but he gives his brothers a share to cultivate, and a father's moveables are divided equally among his sons. The women are left to be provided for by the sons until they are married, or become concubines.

My informants have no tradition concerning their tribe having emigrated from any other country, nor have they ever heard of any emigration from their hills; but in the hills of Mallepoor, south from Mungger, there are about 100 families of a similar rude tribe called Naiyas, the name usually given to the Mal by the neighbouring Hindus. These live by cutting timber, and have scarcely any agriculture. Neither Naiyas have indeed any knowledge of the other.

**GENERAL MANNERS OF THE HINDUS.**—In this district I shall chiefly confine myself to those which belong to Ma-

gadha, and they differ very little from those of Mithila, which have been described in my account of Puraniya. I shall therefore confine myself to the mention of their differences. The pure castes are allowed to eat rice cleaned by boiling, an indulgence, however, from which a great many abstain, especially the Baniyas. Brahmans do not eat meat, except such as has been sacrificed, and that of weathered goats. The other pure tribes do not eat tortoises, and as usual the sect of Vishnu, even of the lowest rank, abstains entirely from animal food and liquor. On this account, people of this sect seldom take Upades until advanced in years. Many of the hill tribe kill and eat the ox, and some of them eat rats, serpents, and jackals, and monkies. Some Brahmans smoke tobacco. Except Brahmans, Rajputs, a few of the Baniyas, and the sect of Vishnu, all avowedly drink spirituous liquors. Somewhat more than in Mithila celebrate their parents' memory in the Tithi; but they only observe the Amabasya of the month Aswin. The people here have no objection to live in a house where a person has died; but yet they very seldom allow any one to die in the house, least he should become a devil or ghost. If near the holy river, the moribund are placed with their feet in the water, and the Purohit reads prayers until they die.

The low castes marry earliest; but the high castes almost always procure matches for their daughters before they reach the age of maturity. The two most heavy expences which a Brahman incurs, are the marriages of his children, and the assuming the thread; but, if they have not money enough of their own, they can usually raise it by a subscription of the neighbours. The season for marriage lasts Magh and Phalgun, stops in Chait, and recommencing in Vaisakh, continues all Jyaishta and Ascharh. The expence and noise are intolerable, and for a great part of the time many people continue idle, going from one feast to another. There is little or no trouble in matching their girls with persons of proper rank; the Brahmans here being less attentive than in Puraniya to distinctions of that kind. The men very seldom take a second wife, unless their first has lived long without having children.

Among the castes who keep concubines, the younger brother cannot take the elder's widow except she is willing,

and she may go with whomsoever she pleases. The concubines are widows, and are not connected with their keeper by any religious ceremony; but the connection is indissoluble, except on account of infidelity. They are called Samodhs, Sagai, and Chuman, and their children may intermarry with those of virgin spouses. An unmarried woman who has had a child cannot be married; but, if her lover has been of the same caste, she may live with him as a Samodh; he must however in that case pay a sum for purification. If her paramour has been low, she is turned out of her caste, and her kindred must pay the expense of purification before they will be received in company. The children of private connections are illegitimate.

Widows in some parts burn themselves pretty frequently,\* especially the Bhojpuri tribes settled in Mungger. In that town about one in a year may burn herself, and in the whole district besides there may every year be about two sacrifices of this nature. In my account of the castes I have mentioned the principal sects to which each is addicted. The Pandit of Mungger thinks that in Magadha the three sects of Vishnu, Siva, and Sakti are nearly equal in number. The doctor chiefly followed by the sect of Sakti is Krishnananda. None profess themselves of the Virbhav, at least in Magadha; nor is the Syamarahasya in request. In the Bengalese part almost all the sect of Vishnu worship Krishna. In Magadha and Mithila they chiefly worship Ram. There are a very few of the sect of Saur and Ganapatya.

All sects and tribes make offerings to the Grama Devatas, but the sect of Vishnu do not kill the animal; they turn it loose. In the account of the topography of the divisions I have mentioned the most usual of these deities, many of which are males, and seem to have in general been rather men celebrated for their piety than for their heroic actions. Many again, both male and female, seem to have been the deities of rude tribes who formerly inhabited the country, and whose descendants have been converted. The females have usually annexed to their name the title Mata, just as in

\* This horrid murder is now totally abolished: I established in India a journal in four languages, which led to its safe and immediate cessation in 1829.—[ED.]

the south of India they are called Uma, both words signifying mother. Many again of these gods are called Bhut Devatas or devils, by the Brahmans, who however do not fail to worship them. They have no images, but sometimes a rude stone, or where that cannot be procured a lump of mud, generally on a hill, or under a tree. Many have Brahman Pujaris, and many have persons of low or even vile tribes approaching on being Mlechchhas : some of both kinds have endowments. In the part of the district, which formerly belonged to Behar, the priests of most of the village deities are called Kaphri, a word peculiar, I believe, to that part of the country. The Kaphris are supposed to be capable of inspiration by gods and devils. Those who are in danger from disease, not only apply to procure favour from the god, but to know the result. When the Kaphri makes the offering, he becomes violently agitated, and, after the usual mum-mery, gives a response. When people are bitten by serpents, they are in many parts carried to a temple of Bishahari, and the Kaphri pretends, by looking at a pot of water, to foretell the event. If the water is agitated when the offering is made, it is supposed that the deity has come to assist in the recovery, which will of course take place. It is not only the Kaphris that are supposed to be capable of inspiration ; but the devils or gods are supposed to inspire another class of men called Chatiyas, who on such occasions are violently agitated and give responses. Some of these Chatiyas are Brahmans, others are low fellows. The ignorant worship them, offering sacrifices, milk, sweetmeats, and the like. Each Kaphri or Chatiya, who pretends to be inspired, has an attendant named Phuldhariya, who conducts the ceremonies, and holds his master while he pretends to be deprived of reason by the deity or devil. He also explains what his master says, which is generally unintelligible. In fact he is generally the greater rogue of the two.

The following are the chief Grama Devatas. Kali, in some places called Burhi Kali, is well known as the great object of worship among the Brahmans of Bengal. Siva is in some places here considered as a Grama Devata, is sometimes called Kanggali or the beggar, in others Burhanath, in others Gaurisangkar, and in others Bangkanath. One of the most common is Bishahari, the terrible reptiles under

her authority being uncommonly destructive. Siddheswari, Chandi, and Mahamaya, are not very common, and I saw none of Sitala. Makeswari is a female deity.

Dubepbhayharan, in the very extensive territory of Kharakpoor, is the most common village deity. He is supposed to have been a Brahman of Kanoj, on whose lands Abhiram, a Kshetauri Raja, built forcibly a house. The Brahman, in order to be revenged, ript up his own belly, and, having become a devil of the kind called Brahmadasya, has ever since been a terror to the whole country. In particular he has destroyed the whole Kshetauris; and those who call themselves such, are alleged by the Kaphris of this god to be mere pretenders.

Pachuya, a male devil, who destroys children. Ram Keyari, a male deity. Mahadano or Dano and Pahardano, a male god of the rude tribes. Bisurawat, who was a holy man of the Goyala tribe. Chamufoujdar who was a holy man of the Tiwar tribe. Kama and her husband Kira were two holy persons of the low tribe called Musahar. Chaldev, a god of the Maler. Nilamata, the god of several rude tribes. Hari Ojha, a male saint. Ratnamohan, who was a Zemindar Brahman, that was killed by a tiger, and became a devil, of whom every one is exceedingly afraid. He is chiefly worshipped at marriages. Kokilchandra is a devil exactly of the same kind, but he is addressed chiefly at harvest. Several of his priests are Brahmans. Jaguhajra, a watchman or Dosad. Garbhakumar. This devil, according to some, was a potter, according to others, a milkman; but it is generally believed, that like the two Brahmans, he was killed by a tiger, and his ghost has ever since been a terror to the neighbourhood, and it is deemed prudent to worship him. His priests are milkmen. Bhaiya Singhamata, a female. Sivaram Thakur, a sainted Brahman of Kanoj. Ram Thkur another. Kalkali, a female deity. Ajan Singha, a sainted Brahman. Sales, of whom I have made mention in my account of Puraniya. Kamalnaiya, a sainted or bedeviled Brahman. Bhimsen, mentioned in my account of Puraniya. Vindhyaivasini, a female deity. Rakshasi, a deity of the Maler. Scharavasini, a female deity. Bajun, a female deity. Takshak. Sanggu Mandal. Satbhaiya. Loknath. Sabal Pahalwan. Babu Ray, a male devil. Brahma Devata,



a deified saint of the sacred order. In many villages the deity is anonymous, and is merely called Grama Devata. In Magadha the Charakpuja is not in use, except among some Bengalese settlers.

The chief worship among the Hindus of this district is bathing in the river, and pilgrimages. Out of the district, Baidyanath is the chief place of resort; perhaps one quarter of the Behar population, including women and children, and the western tribes settled in the part of Gaur belonging to this district, go there annually. Few of the Bengalese give themselves the trouble. Next to Baidyanath, Harihar Chhatra at the junction of the Gandaki and Ganges, opposite to Patna, is the place resorted to by most people of this district. Perhaps 5 or 6,000 go there on the Purnima of Kartik. It is a great fair, and the trade and amusements of the place seem to be a principal object.

About equal in reputation is the Mela near Kangrhagola, at the junction of the Kosi and Ganges, as mentioned in my account of Puraniya. To Jagannath perhaps 1,000 people may go annually, and as many to Janakpoor; 500 may go to Gaya, and 300 of these may go on to Kasi. Perhaps 100 go to Kasi alone. Perhaps as many go to Prayag at the junction of the Yamuna with the Ganges. Here the worship by hoisting flags is not fashionable. In the Bengalese part, during the month Kartik, many people hoist a lamp, and bunch of sweet basil (*tulasi*), at the end of a bamboo.

In Behar the Holi is much more celebrated than the Durgapuja, or Dasahara. In the Bengalese part the reverse is the case. At the Holi great multitudes of men assemble, wherever there are images of Krishna and Radha, and sing indecent songs, and throw red starch at each other. In Sravan (from the middle of July to the middle of August), at a festival called Jhulan, the women and children assemble at night, and amuse themselves by a swing, and celebrate the loves of Radha and Krishna in songs.

The Goyalas in October or November, celebrate a holy day called Govardhanpuja or Annakut Yatra. They pray to a heap of boiled rice, which is supposed to represent the hill Govardhan, where Radha and Krishna passed some of their time; and make an offering of food, red lead, turmeric, and flowers, to each animal of the cow kind that they

possess. They also repeat some prayers to the sacred herd. The Sudras are not allowed to read the sacred books, and the Kshatris do not give themselves the trouble. In Kartik, Magh and Vaisakh, some learned men read small portions of the Purans to the rich, and explain the meaning in Hindi. The portions selected explain the modes of worship, that will be agreeable to such and such gods, and procure such or such blessings. The people of Magadha have little or no objection to take an oath by the river water. The Purohits have here much more profit than the Gurus or religious guides, although every Hindu here, as elsewhere, acknowledges that his Guru or spiritual guide is perfectly equal in wisdom and power to God.

In a few places are some Brahmans, who perform the ceremonies of those only who abstain from Samodh; but in others the same person officiates for all the pure tribes. The whole are called Paurohityas, and the term Dasakarma is not in use. There are here no Chausakhis, each impure tribe has a sect of degraded Brahmans peculiar to itself. No Guru of the Sakti sect has any considerable influence. They are mostly Brahmans, but the Dasnami Sannyasis have begun to interfere.

The Saivas do not here conceal their sect. The Brahmans of this opinion have Gurus among their own order. The Rajputs and Sudhas are under the guidance of the Sannyasis as in Puraniya. In this district there are scarcely any of this order of men who are merchants, perhaps five or six houses; and many of those, who act as spiritual guides, are (Udasin) unmarried, and are supposed to observe the rules of their order. There are of them about 30 Akharas, the most distinguished of which is on the rock near Sultangunj, that is surrounded by the Ganges. Each Akhara contains several Sannyasis under the authority of a Mahanta or Mathdhari. They seemed to me to be poor ignorant creatures, very pious, and zealous in the mortification of the flesh. Some of them can read, but only one of them understands any Sangskrita. Of those who have married, and have become San-Yogis are 150 families, who also act as instructors. Some of them have endowments; others rent land, and employ servants to cultivate; none of them have any sort of learning. By far the greater part of the people of the sects of Siva and Sakti are

instructed by strangers, who come wandering through the country, and those who have their houses or Akharas here, wander in the same manner; for it would appear, that the more they are known the less they are respected, or that like the prophets of old, they are little valued at home.

The Kanphatta-Yogis have a few disciples in this district; but none of them reside. The Janggams are married, and observe the rules of purity commonly kept by Sudras of the sect of Siva; that is, they eat the meat of sacrifices and fish, drink spirituous liquors, and keep concubines. All their male children follow their profession, which is that of mendicants. The women do not beg. The men when begging, sing concerning the nuptials of Siva and Parwati, ring bells, and make various noises to attract notice. They wear many beads, and have on their head an ornament of brass, which they call a temple of Priapus, and it contains an image of the great god. They consider themselves as representatives of the sun; but worship Siva alone. They are followers of Gorakshanath, who was born of a cow, impregnated by their god. Gorakshanath\* is however considered as a god, and his disciples the Yogis, are the Gurus of the Janggams. Their ceremonies are performed by Brahmans of Mithila, who are not degraded. Their dead are buried. They would admit proselytes from the highest ranks; but afterwards would neither eat in their company, nor give them their children in marriage. They take no share in the instruction of the disciples of the Yogis. They are quite ignorant, and imagine that Gorakshanath was begotten, while Vishnu was churning the ocean, a fable which seems to be in favour among the Hindus, in proportion to its monstrous extravagance. Of the Aghorpanthi, it is said, that there are 19 persons or heads of families.

At Mungger I procured an interview with Betolnath, and one of his pupils. The chief was said to be at the head of all the sect in this district, and was called Guru; but was so drunk as to articulate with difficulty, and he could never read. The pupil (Chela), who was tolerably sober, alledged that the Guru would succeed to the dignity of Kinanath of Benares, when that chief of the whole order died. The Gurus should abstain from all connection with women, and

the Chelas do not marry ; but they have families by women of the sect, who by exchanging necklaces form permanent connections equally binding with marriage. Disciples may be admitted from among Brahmans, Kshatris, Khattris and Rajputs, but from no other caste. Betal was born a Rajput. The Gurus have no fixed abode, but go from one Chelas house to another ; and the Chelas live entirely by begging, or rather by terrifying weak people ; for their customs produce universal abhorrence. They are permitted by their rules to eat whatever they please, even human carcases, which they occasionally do, as they say, merely to excite the astonishment of those from whom they wish to procure charity. They do not care who cooks their victuals. They say, that there is only one god Nirakar (the immaterial) Brahma, at least, that he is the only proper object of their worship ; for it does not seem ever to have entered into the imagination of my informants to dispute the existence of other gods. They say also, that they follow the doctrine of Gorakshanath, and that some few of their Gurus can read.

In the eastern parts of the district the Goswamis of Bengal have by far the greatest influence, especially the family of Nityananda, who may have ten-sixteenths of the people of this sect. One of the family called Ballabikanta, has taken up his abode at Syamgunj in Aurungabad. He is not considered as a man of learning. Another branch of the same family is represented by Tilakananda, Chhabilananda and Premananda, who live at Nasipoor and Panisala, near Moorshedabad and at Junggipoor. The eastern part of the district is considered as their property (Velayet), and every worshipper of Krishna gives them somewhat, although he may have another Guru. They have appointed a Foujdar, who resides at Manggalpoor. To assist him in collecting their dues, they have from 25 to 30 Chhariburdars. These officers are not Brahmans, and take no share in the religious duties, which are performed by Adhikari Brahmans for the high castes, and by Vaishnavs for the low. Acharya Prabhu descended of the same doctor, and mentioned in my account of Puraniya, has about two-sixteenths. The descendants of Adwaita residing in Bholahat have about 2 anas. The Ramayits of the west have procured the remainder, except about 400 families belonging to Thakur Mahasay.

The Udasin Vaishnavs, who act as Gurus for the lower ranks, amount to 140 converts, and have not married. Many of them are vagrants, and 100 of the converts are in the capital, where the customs of the vicinity require a considerable restriction on the acts of the flesh.

Of the married Vaishnavs there may be near 700 houses, many of whom are the Gurus for the lower classes in the part of Bengal belonging to this district. There are besides about 50 houses of Gaur Vaishnavs, all married. None of the Sakhibhav Vaishnavs reside; but those of Puraniya act as Gurus for some people in this district. There are here no Narha Vaishnavs.

Confusion arises from the term Vaishnav being applied to the religious among the worshippers of Ram, as well as to those who adore Krishna; and the Ramanadis and Ramanyits or Vairagis are considered as the same, although the one are descended of Brahmans, and the latter Sudras. Those, who abstain from marriage, in this district amount to 18 Akharas; and those who have married to 35 houses, but a vast many strangers frequent the country. Some of the most remarkable convents of this order are dependent on the Mahanta, who resides in the Mastarami Akhara at Murshedabad.

The sect of Sivanaryar, of which I never before heard, say that this person was born as a Narayani Rajput of Sesana, three or four days journey west from Gazipoor. He set up as an incarnation of God, and he called those, who adopted his doctrines, Santas (pious), and does not seem to have established any hierarchy. Though dead, he is still called Guru, and his three sons are only called Santas, but are highly respected.

He wrote several books, Gurunyas Santakari, Santabilas, Santaupades, Santaparwana, Santasundar, Santasagar, Santa Mahima, &c. The Gurunyas contains the first, and most essential doctrines, and is that in most common use. It is written in the vulgar language of the country, where the Guru lived. A little Sangskrita is intermixed. The sect seems to have been propagated by these books distributed among those who can read, who explain them to those who cannot, and the principal agent seems to have been Rokhanram, a Rajput at Barsundi near Gazipoor, who was a very intelligent person. Many go to him for advice, and he receives presents. The sons of Guru seem occasionally to travel, in attempting to

explain the doctrine of their father. My informant Bechuram is the most intelligent man at Mungger of this sect. He pretends to no superiority over the other Santas of the place; but every year all the sect assemble at his house on the Basantapangchami, and bring presents. A copy of the book is produced, and part of it read. Then it is laid down and receives offerings of flowers, red starch, betle, and sweet meats. The whole is thus consecrated, and divided among the assembly. Occasionally, at different times, two or three people assemble, but at no fixed times, and present offerings in the same manner to the book, and hear it read. The Santas ought to acknowledge no God, except Sivanarayan; but many ignorant persons cannot be persuaded to abstain, from the worship of destructive spirits, in cases of danger, especially if their wives adhere to the old doctrines. They consider, that Sivanarayan is omnipresent, and always existed, and that his appearance on earth lately was an incarnation for the instruction of mankind. All persons, who are not Santas, will undergo transmigration; all the good Santas go to Santades, or the abode of the pious, but bad men although believers, will be born again. They employ Brahman Purohits to perform the ceremonies at marriages, funerals, and births; but merely in compliance with the custom of the country. Every Santa observes the rules of the caste, to which he formerly belonged, and continues to intermarry with infidels. They do not attempt to instruct the low castes, and they cannot admit Moslems; because these, having lost their own religion, would have no caste, and no one would associate with them; but there seems to be no absolute law against admitting proselytes of any kind. When I asked for a copy of his book, the poor man seemed to think, that he had made a convert. It is said, that in the vicinity of Benares there are many Santas, especially among the military tribes.

The priests, who officiate in temples, are in Magadha called Panda, a title, that in the south of India seems confined to the Sudras, who officiate in the temples of Siva. The profession here is not considered as honourable for the sacred order; but less disgrace attends it in Magadha than usual, and the Pandas are not excluded from intermarriage with the highest families. In some parts the Zemindars take a share of the profits, which the priests receive: and there are

temples, which have endowments, and have no priests. There the Zemindar keeps a clerk, and takes the whole profit.

The young Brahmans usually pass four days in the state of Brahmachari, before they assume the thread. During this time they eat only once a day, abstain from salt, oil and animal food, and study forms of prayer.

No Brahman of this district, so far as is known, has become a hermit, nor has any one gone to Kasi to become a Gymnosophist. I saw a fellow on the rock near Sultangunj, who had reduced himself to this state, and was a most impudent and saucy beggar; but he was not of the sacred order, and I was happy to learn from himself, that the people treated him with neglect. In some caves dug into the rock at Patharghat five or six Tapaswis or penitents have taken up their abode. They are strangers, and sit constantly in their dens, feeding on what is given to them without solicitation. It is supposed, that they often want for a day or two at a time; but, when I saw them, they appeared to be in tolerable case. Two or three old women, one of whom formerly followed the camp, have dedicated themselves to God, and are called Vaishnavis, have procured some images, called their houses Akharas, and give instruction (Upades) to sundry persons, who worship Ram. One of them at Sibgunj has taken the title of Mahantini. No women have become Avadhutinis; but mendicants of the kind occasionally come. In the part of this district, that belongs to Behar, there are no Dols, like those of Bengal.

The purity of caste, among the high tribes, is preserved by assemblies (Pangchayit), in which all the members are equal. Among the lower tribes there are chiefs called Serdars, Chaudhuris, Mehturs, or Mangjans. The office is usually hereditary, but on complaint from his dependents they are changed by any person in power, such as the Zemindar, Tahasildar, or Darogah, who procures an order from the magistrate, who, if he chooses, confirms the change. Widows sometimes succeed to the offices of their husbands. The people under each chief are called a Chatayi, as all sitting on the same mat, an honour which they forfeit by acting contrary to the rules of caste; but the authority of these chiefs is not confined to matters of caste alone. No man will enter into any engagement to perform work without the order of his

chief, who thus makes a monopoly, in the true spirit of corporation. The chief cannot excommunicate without the consent of the principal persons of his Chatayi. The chief receives a commission on the wages given by persons of rank to the labourers, whom he has furnished, and has the chief share in the feasts, which are given at purifications. Under the chief is a person called the Barik, who receives the fines for transgressions, and with them purchases the feast. On dividing this, if there are any remains he takes them to himself; if there is a deficiency, he must furnish it from his own house. Some of the Baniyas, and all the inferior castes have chiefs.

Among all Hindus, wherever an animal of the cow kind dies by accident, such as by fire, by the bite of a serpent, or the like, or, if the beast dies when tied in the house, or to a post, the master of the animal incurs sin, and must perform a ceremony of purification (Prayaschitta). Certain Brahmans, skilled in the law, point out the ceremonies proper to be performed, according to the nature of the case; and, in some parts of the district, the Zemindars have appointed certain Brahmans for the purpose, and no others are allowed to give their advice, or rather to issue their orders.

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At Bhagulpoor there is a small church belonging to the Roman Catholics, and about 50 Christians of that persuasion. Half of them are descendants of Portugese, and the others are native converts, who retain their own dress, and language. The priest is a native of Milan, sent by the Societas de propaganda fide; and, so far as I could judge from a short interview, was a man of decent manners and education. He has charge also of the flock in Puraniya, amounting, as he says, to about 40 persons.



## CHAPTER IV.

THE NATURAL PRODUCTIONS OF THE DISTRICT OF  
BHAGULPOOR.

**ANIMALS.**—The most common monkey in this district, and the most destructive of the wild quadrupeds, or rather as the French naturalists say, of the wild four handed animals, is the Hanuman. This animal seems confined to certain territories in a manner, for which I cannot well account. On the north side of the Ganges there are none, which occasions no difficulty, as the river is too wide for them to cross; but, although they are numerous in almost every wood in the district, and are exceedingly common in the town of Bhagulpoor, there are scarcely any in Rajmahal or the low country S.E. from it, nor are there any in Mungger, Suryagarha, or the adjacent villages. There seems to be nothing in the situation of these places, that can occasion the difference. I presume, therefore, that the people of Rajmahal, Mungger, &c. resist the incursions of these destructive animals with more vigour, than the consciences of the people of Bhagulpoor, and of other sufferers would admit. The people of Mungger, indeed, deny their using any force or violence, and pretend, that when a Hanuman comes to invade their property, they merely make a noise, and use threats, but this I have seen tried very often with no effect, and I have no doubt, that more severity is used, but this is looked upon by so many as sinful, that the poor people, who defend their property, are afraid to avow their industry. I have also no doubt, that a very moderate exertion of violence might altogether expell these pests, and the havoc, which at present they commit on the crops, is very great. To destroy one of them is considered almost as great a sin as to kill a cow; and moreover it is imagined, that such an action is exceedingly unlucky, and that where a Hanuman has been killed all the people will soon die. His bones also are exceedingly unfortunate, and no house built, where one is hid under ground, can thrive. The discovery of these bones, or the ascertaining, that none such are concealed, where a house is to be

built, is one of the employments of the Jyotish philosophers of India, so highly vaunted for the purity of their science. It is perhaps owing to this fear of ill luck, that no native will acknowledge his having seen a dead Hanuman; for it can scarcely be supposed that the animals conceal their dead, as many of the natives suppose. In the town of Bhagulpoor and some villages they are far from being shy, but have no sort of tameness, and in the woods they are very noisy, but shy. They herd in considerable numbers. The short tailed monkey is also pretty common, on both sides of the Ganges.

The black bear of India (Bhal) is found in all the woods of this district on the south of the Ganges; but, except towards the southern boundary, is not very numerous, and does little harm. Sometimes, however, the bears kill a man; but they never attack cattle.

The *Ursus indicus* of Shaw is found on the hills south from Mungger, where it lives in holes under large stones or rocks. It is called Bajrabhal, or hard bear, because it may be beaten very much without being killed. These animals live in pairs or families, and eat frogs, rats, white-ants, and other insects, for which they dig. The people here have never seen this animal digging up graves, nor eating dead carcasses, as I formerly heard was its usual custom. In this district the Indian *ichneumon*, or Biji, is pretty common, and undoubtedly kills, and eats serpents, on which account it deserves the utmost protection. Had Hindu fable been directed to such a laudable purpose, it would have merited some excuse; but in general its object seems to have been to recommend whatever is useless, and often what is prejudicial. On the banks of the Ganges there are many Otters.

The Tiger or Selavagh in this district is pretty common, but it cannot be said to be very destructive. It is not beasts of prey, that are most prejudicial to mankind. Those which attack the sources of subsistence, such as monkees, hogs, deer and elephants, do much more harm. I am indeed persuaded, that the tigers, by destroying hogs and deer, do more good than harm, at least in a district, where the two latter animals are so numerous and destructive.

Of the two large spotted animals of the feline genus that are common in India, I saw only the former. The Harvagha or Harak, derives its name from eating bones; for it pos-

sesses so little swiftness that it cannot overtake any living animal. It is said to resemble in size the spotted tiger or leopard; but it has about the loins a peculiar weakness, to which its want of swiftness is attributed, and it is striped like a tiger, not spotted like a leopard. It was said not to be uncommon in the southern parts of the district, where it remains the whole year; but, although I have offered ample rewards, I have not been able to procure a specimen dead or alive; and the leopard at Mungger is called Lakravagh.

The hyæna or Lakravagh in this district has acquired an uncommon degree of ferocity, is said to carry off goats, calves, and sometimes even children; for it is a bold animal, and enters villages at night, which tigers or leopards seldom do, at least with an intention of attacking the human species. The Kohiya, although I have never been able to procure a specimen, is undoubtedly an animal of the canine genus, of which I have heard reports from a great variety of places in India, and have been favoured with some drawings. It frequents the southern parts of the district; but does not breed there, nor does it come every year. It usually appears in February, coming in packs of from fifteen to twenty, and hunts in company. On its arrival, all other wild animals instantly fly; for it attacks even the tiger without fear, and is supposed to fly immediately at his eyes. It is, the natives say, like a dog, but longer in shape, has a black muzzle, and is of a red colour, without spots. The Kohiya occasionally kills calves, taking them to be deer, which are its favourite food; but the good which it does in driving away other wild animals, is ample compensation. Such is all the information that I have been here able to procure concerning this animal, which I suspect is the real *canis aureus*, or according to Buffon, the *pantheros* of the ancients; while our jackal, which has in its colour nothing red, or still less golden, seems to be the *adive* of the great naturalist of France, a name which in the dialect of Karnata merely implies any thing wild.

This jackal in some parts of the district, especially in the part which is included in Gaur, is more numerous and noisier than I have any where else observed. It is not only during night that one is there annoyed by their dismal and discordant howlings. This gave me an opportunity of ascer-

taining that it is this animal which makes the howl, resembling somewhat the word Phao, concerning which the natives are very much divided, some asserting that this noise is made by the jackal, while others allege that it is the voice of the fox. The natives allege, that the jackal is most noisy at the end of every watch (Pahar) of the night; and so far it may be allowed, that for a little they usually set up a general howl, and then for some time continue silent. So indistinct is the native nomenclature, that in Bengal this wretched animal and the powerful royal tiger are often called by the same name, Siyal. When the growling of a tiger is heard at night, a Bengalese will not say that it is the roar of a tiger, least the animal should instantly rush in and devour him; at night he always speaks of the tiger by the name Siyal; and it is only in the day that he ventures to call the animal a Vagh. The jackals, called Gidar in the Hindi dialect, are accused of being great thieves, and of carrying away clothes, money, and many other things, for which they can have no use. The fact, I believe, is, that they sometimes carry away parcels, thinking that they contain food. At Phutkipoor, a bag belonging to one of my servants, was taken out of his tent, and in the morning its contents were found scattered about at a little distance. This was attributed to the jackals, and perhaps with reason, as a thief would probably have carried away the articles, which were wearing apparel. The wolf (Hundar) is said to be sometimes but rarely seen in this district. The Indian fox (*Canis Bengalensis*, Pennant) is very common, and is a pretty harmless creature.

According to the report of the natives, all these beasts of prey may annually kill 20 people, and 250 head of cattle. The porcupine, called here Sahi, is not very common, which seems to be partly owing to its being eagerly sought after by many who eat it, and partly to the soil being too stiff. In the hills it is more common than on the plains, and finds shelter under large stones and rocks. The Indian hare (Khurgosh), is much more common, although a good many are killed for eating. In general, however, the natives seem to give a decided preference to the porcupine; although both are admitted to be pure food. In every part of the district the small striped squirrel (Gilhari Lukkhi or Kat Biral) is very common. The *Sciurus Indicus* of naturalists is

not uncommon in the woods of Mungger, where it is called Rato. Except when breeding, it is a solitary animal.

The animal of which the natives are by far the most afraid, and to which they attribute their having deserted many villages, is the elephant. This animal is, however, confined to two parts. The greatest number frequents the Rajmahal hills and their vicinity, and it is said, that it is within these 30 or 40 last years that the wild elephants have made their appearance. The stock is said to have been some that made their escape from the Nawab's stud, which is often sent for forage to the vicinity of Rajmahal. So far as I can learn, there may be in all 100 head, partly on the east, and partly on the west side of this range of hills. From the latter, small herds sometimes make excursions so far as the hills south from Mungger; but this is not usual, and hitherto these animals have in general confined their depredations to within seven or eight coss of the Rajmahal hills.

The natives, I am persuaded, greatly exaggerate the injury done by these animals; but there can be no doubt, that these herds are chiefly fed on the crops; for in many woods frequented by the elephants there is scarcely any forage that they will eat. Palms, ratans, scitamineous plants, bamboos, reeds, and marsh grass, are there very scarce, nor are the fig-trees, which the elephants eat, common any where except near villages. It seems therefore surprising that the elephants have not entirely resorted to the western hills, where the bamboo is very abundant, and where in some places there is a tree called Galgal, of which they are said to be fond. This circumstance, in my opinion, shows that the elephant is not an adventurous animal, and might be easily repelled.

The alarm that the elephants occasion is exceedingly great. One night that I lay close by the hills, although I had a guard, the men of the village close by my tents retired at night to trees, and the women hid themselves among the cattle, leaving their huts a prey to the elephants, who know very well where to look for grain. Two nights before some of them had unroofed a hut in the village, and had eat up all the grain, which a poor family had preserved in its earthen store (Kuthi). On the north side of the river, a colony of elephants, similar to that in the southern parts of Puraniya,

frequented the marshy woods of that part, and occasioned an equal alarm.\*

In most of the wild parts of the district, the rhinoceros is occasionally but very rarely seen. Formerly, in the marshes at the foot of the hills between Rajmahal and Sakarigali, there were many, and even now there are always some, but they have been so much disturbed by European sportsmen, that they have become scarce, and exceedingly shy. They never did much harm. In almost every part of the district wild hogs are to be found, and even in Mungger, its best cultivated part, they have been known to come into the fort; but in general they are neither numerous nor very destructive; and are worst on the north side of the Ganges. In the wilder parts they seem to be kept within bounds by the number of persons of low birth, who take a delight in hunting them on account of their unclean flesh.

The Indian term Harin, is difficult to explain. It includes not only the *Moschus*, *Antilope*, and *Cervus* of European zoologists, but also a wild species of the *Bos*, while it excludes the wild buffalo. The *Moschus Memina* is a pretty little animal, not much larger than a hare. Intermediate between the *Moschus* and *Cervus*, as having the tusks of the one, and the horns of the other, is the rib-faced deer of Penant, which is pretty common among the hills. The *Cervus Axis* in many parts is exceedingly common and destructive. It is perhaps the finest of the deer kind, not only on account of its beauty, but of the facility with which it is tamed.

A very beautiful animal of the genus *Antilope* is pretty numerous. It is found in all the woods of the southern parts of the district, and goes in small herds or families. It resembles very much the Nilgayi, or *Antilope picta*, and may perhaps be considered as a mere variety of that fine animal; but it is much the colour of the stag, and grows to the size of a small horse. From its make, it would appear to possess both great strength and agility, and its shape, carriage, and motions are graceful.

The *Antilope Cervicapra* is the wild quadruped of which I saw the greatest number in this district, but that probably

was owing to its frequenting open naked plains, while the deer and hogs, in the day at least, usually conceal themselves in woods and thickets. It goes in small herds of from three to seven. I have not observed more than one male with a herd, but I have sometimes seen solitary males hovering around. I suspect, that the males, so soon as they become fit for procreation, fight until only one remains alive, or at least until all the weaker competitors are compelled to retire from the herd. It seems difficult to account for the bounding which this animal uses in running, when not hard pursued; for it very much impedes their progress, must be very fatiguing, and seems to be totally useless. I at one time thought, that it might be with a view of enabling the animal to see if any enemy was concealed behind bushes or other cover; but I have observed them to use this manner of advancing when on exceeding bare plains.

Along with musks, deer and antelopes, under the generic name of Harin, the natives class an animal of the genus *Bos*, which in the Hindi dialect is called Gaul or Gaur Harin, and in the Bengalese Gyal Harin. I could procure no specimen, except a pair of horns without the skull. The Gaur is represented as extraordinarily fierce and untameable, which is by no means the case with the Gyal of Chatigong; but I have heard from Mr. Maera, surgeon there, that in the eastern woods an animal resembling the Gyal, only of extraordinary ferocity has been sometimes found. The Gaur is said to be about the size of a buffalo, and in this district is rare; but in all the wilder parts of the south it is occasionally seen.

The wild buffalo, so common in the eastern parts of Bengal, is scarcely known here. No native of this district, it was alleged, makes hunting a sole profession; but the men of the hill tribes pass a great deal of their time in this exercise, partly from the love of sport, and partly to supply themselves with food. The boar, deer, antelope and porcupine are their common objects of pursuit, and the bow and arrow their usual implement. The arrows are in general poisoned with the root brought from Nepal. Some of the ruder tribes towards the south use the same means; but in most places the farmers have nets, with which they take these animals; and hares are so abundant, that they are knocked down with sticks, although they also are often caught in nets. In many

places dogs are trained to drive the wild animals from their cover, and in a few the matchlock is used in their destruction. On the north side of the river it is in the rainy season chiefly, that the farmers hunt. The animals then are often so surrounded by water, that even tigers fall an easy prey. In the Ganges porpoises are exceedingly numerous, and are occasionally caught in the fishermen's nets, and their oil is used for the lamp.

Birds of prey are numerous, but do little harm, carrion and wild animals giving them a copious supply of food. Some Rajahs keep tame hawks for sport. Ducks, teals, snipes and the Bageri lark or Indian Ortolan are taken; and in some places we heard that partridges and quails were caught, and fattened by the natives for their own eating. The small singing birds, which the Mirshekars catch with nets, are chiefly a species of the *Loxia*. The Aggin, a lark very much resembling the *Alauda arvensis* of Latham; but it is considerably smaller, and its note not so strong as that of the sky-lark of Europe, its manners are very similar; the Chandul is a crested lark.\* The birds that are most destructive to the crops are the crane, parakeet and peacock. The latter is exceedingly numerous, and it is good eating.

Near the Ganges, and in the larger of its branches on the north side, tortoises are very numerous; they are caught by the common fishermen and are saleable; but except among the lower tribes are in little request. Some are sent from Rajmahal to Moorshedabad, and to the mountaineers. At Mungger there are reckoned seven kinds. First, Singgiya, which is said to grow to between five and six feet in length; the other kinds vary from two feet to four feet in length. All these tortoises lay their eggs in the sand, digging a hole for the purpose, and covering them with sand. The season is from about the 1st of March to the middle of April. On other occasions the whole continue always in the river, except the Katha, which occasionally during the afternoon basks on the shore. They are supposed to feed chiefly on fish; but they are also thought to eat shell-fish, the reed called Kosala, the roots of which are inundated, and mud. Their eating the Kosala appears to me doubtful; and what the natives mean

\* See Puranya for a description of various birds.—Ed.



by eating mud, must have arisen from their having seen these animals searching among the mud, for worms, snails, or such like animals.

Crocodiles, both of the Ghariyal and Boch kinds, are numerous in the Ganges, and still more so in the Tilyuga. They are occasionally caught in the fishermen's nets; but are not intentionally molested, except on the north side of the Ganges, where the low tribe Musahar pursue them with spikes, and extract the oil. The Ghariyal when caught, is eaten by the fishermen, as well as the Musahar; but by no others. The Boch is rejected by all. Some invalids, whom it was attempted to settle on the banks of the Tilyuga, assigned the number of crocodiles as a reason for having deserted their lands; but I did not hear that in the whole district these animals had ever destroyed man or beast. I have however heard of the Boch having bitten people very severely. In one tank I heard of their being tamed to a certain degree, as mentioned in my account of Puraniya. Lizards are not common. Serpents are certainly more numerous and destructive than in any of the divisions hitherto surveyed, and it was alleged, that annually from 180 to 200 persons are killed by their bites. The Maler on a hill near Paingti shewed me a hole in a rock, opening into a hollow space close by the path leading up to their village. They said, that this hole was the abode of a very large serpent, which they considered as a kind of god. In cold weather they never saw it; but in the hot season it frequently was observed lying in the hollow before its den. The people pass it without any apprehensions, thinking that it understands their language, and would on no account injure a Maler, should even a child or a drunken person fall upon it. The animal is said to be almost as thick as the body of a man, and is exceedingly slothful. How it procures food, the people cannot say; but they think that it eats deer and hogs. Several such serpents were said by the chief of the village to be in other parts of the hills belonging to this tribe.

In the interior of the country south from the Ganges, fish are very scarce; the rivers, for a great part of the year, are almost dry, and there are few marshes, ponds, or lakes. In the rainy season, however, a few are generated, and are mostly caught by the farmers, as the waters dry up. Near the Ganges again, and especially near the Tilyuga or Ghagri,

on the north side of the great river, there is a great abundance of fish; but during the floods, owing to the want of skill in the fishermen, the supply is every where scanty; and at Bhagulpoor, owing probably to some defect in the police, the scarcity prevails at all seasons, while at Mungger and Rajmahal, not more favourably situated, the supply during the dry season is uncommonly copious, and the quality tolerable.

Some fish are dried, and sent to the interior, and to the adjacent hilly parts of the Virbhoom district; near the Ganges this kind of food is not in request; nor do the people there prepare the balls called Sidal, formerly mentioned. A large proportion of the fish used is far advanced in putrescence before eaten. Rahu, Katla and Mrigal, being sent to Moorshedabad in considerable quantity, sell about one-fourth dearer than the other kinds. In the dry season these valuable species sell at Mungger, for from  $2\frac{1}{2}$  to 3 paysas a ser of 84 s. w. (about  $2\frac{1}{4}$  pound), 64 paysas being equal to a rupee.

Some of the Banpar Gongrhis at Mungger are said to strike large fish with the Gig (Dukti) which is chiefly done in the floods. Some Kewats called Dubaru or Divers are said to pursue fish under water with a spear, and I was gravely assured both at Suryagarha and Mungger, that these men could continue under water a Hindu hour (24 minutes), but two men, that I tried at Mungger, did not complete one minute, although one of them brought up a prawn. The number of fishermen stated to belong to this district was 3800 or 3900; but many of these are employed part of their time gathering tamarisks for fuel, in harvest, and in working the boats which belong to the district. The number actually employed may therefore be 7000; and allowing, that each fishes eight months in the year, and catches five rupees worth of fish monthly, the total value will be Rs. 2,80,000, of which the owners of the fisheries may be able to secure a third part. No fish, so far as I heard is sent to Calcutta. The sales are managed as in Puraniya.

The fishermen during the fishing season can clear from two to six rupees a month, that is on an average four rupees, and the people, whom I employed merely to buy such fish as I wanted, complained of four rupees a month, as being hard wages. The following is a list of some of the species\*, which

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\* Dr. B. goes into a detail of many other species which it is unnecessary to give.—[Ed.]

I procured: I was a good deal surprised to find so high up a fresh water river as Mungger, a species of *Raia*; but I am told, that this fish is not uncommon so high up even as Kanpoor (Cawnpore R.) This species approaches nearer the *Lymme* described by Lacepede, than to any other mentioned by that author; but may readily be distinguished by having a fin on the fore part of the under side of the tail. It does not grow to a large size, at Mungger is uncommon, but is thought very good. The Phokcha of Mungger differs from the species of *Tetrodon*, called by that name at Nathpoor. It is however very probable, that both may be called by the same name, as they have strong affinities. At Calcutta this is called Gang Potaka, from its frequenting rivers, while the other is most commonly found in marshes, tanks or ditches. The fish, which I am now describing, grows to about six inches in length; and, when irritated, does not swell near so much in proportion as the other kind. Bamach is an ugly animal, even for an eel, and may perhaps be the *Murenetachetée* of Lacepede. Europeans, who like eels, think this very good, but it is not common. When full grown it is said to be two and an one-half cubits long, and one cubit in circumference; but I strongly suspect, that the latter dimension is exaggerated, for one, which I procured, 38 inches long, was only six and one-half inches round. It is a very distinct species from the *Vamos* of the lower parts of Bengal, although the names are undoubtedly the same.

The Pathri is a species of *Lutian*, which by the Europeans at Calcutta is often called a whiting, being a fish nearly of the same size, and somewhat of the same taste with our European fish of that name, although it is inferior in quality, and in the eye of the naturalist has little or no affinity. The Kalbaugs (a proper *Cyprinus*), when caught in water, that is pure, and which has a hard bottom, assumes a different colour from what it has in dirty pools, many of the lateral scales being then of a coppery hue. In this case it is called Kundhna. The Rohu, that most elegant of carps, called Rohit in Bengal, is here perhaps the most common fish; but, being generally caught in dirty stagnant pools, it is seldom very good. Excellent Rohus are, however, sometimes procured from the river. No fish seems so much to have attracted the attention of the Brahmans.

Oblong crustaceous fishes are in very great abundance through the whole course of the Ganges, and at Mungger those about the size of a prawn are remarkably well tasted. Small crabs are common in the inundated lands. Insects are very troublesome and destructive. I have not however heard, that Locusts have ever been seen; on the south side of the Ganges the white ant (Diyak) is more destructive, than in any part, that I have ever been. In Gidhaur many heaps of earth, much larger than a native hut, were shown me as the remains of their work. Flying bugs are exceedingly troublesome.

Honey bees are numerous in the woods, but no person makes a profession of gathering the honey or wax, nor is there any rent exacted. Many farmers, however, at idle times, collect both; and usually present a part to their landlord or his agents. The hill tribes gather a good deal of honey, which in general they eat; but those near the great road dispose of it to Europeans, to great advantage, under the pretence of giving presents. In the high parts of the district there are few or none of the shells, from whence lime is prepared. In the low lands they are in abundance, similar to those in Ronggopoor.

PLANTS.—This district is an excellent field for a botanist, although the plants bear so great an affinity to those of the south of India, now best known to Europeans, that I have met with much less new matter than I did in the Ronggopoor district. In most parts of this district the whole waste land is called Janggala, where covered with trees it is called Katban, where covered with thick long grass reeds or bushes, especially tamarisks, it is called Bangjar, and where small bushes are thinly scattered, the waste is called Jhangti; but these terms are not applied with much accuracy, nor are the distinctions of great use. It is estimated, that there are 585 square miles of inundated land occupied with reeds, bushes, and tree. 383 square miles of this are on the north side of the Ganges, and the greater part of the remainder is near that river. A large proportion is covered with tamarisks, about an equal quantity with reeds. A less share with stunted woods of the Kayar (Trees, No. 43), and about an equal quantity with rose trees, and finally the largest share is covered with very coarse bad grass. The woods may perhaps amount

to 70 square miles, exclusive of an equal quantity of rose trees, which do not rise to a height that can entitle them to be called woods, although the perversity of the English language requires that a bush bearing roses should be called a tree.

In woods, thickets of bushes, and deserted villages, which have become totally wild, there are 1731 square miles of land sufficiently level for the plough, and there are 1146 square miles of hills, that are covered with woods. Including the tamarisks we have therefore in all forests and thickets almost 3100 square miles. By far the greater part of these is kept in a very stunted condition by the following causes. In many places the species, that grows, never reaches to the size of a tree, which is especially the case with the rose and tamarisk. In many places, especially on the hills, there is no soil capable of supporting large trees. This cause, however does not operate to a very great extent. Every year in spring the whole forests are burned. This destroys all rotten branches and leaves, and certainly tends greatly to improve the air, to keep open the country and to meliorate the pasture, but it no doubt checks the growth of the tree. It would indeed appear wonderful to any one, who saw the conflagration, at a time when every thing is parched like tinder, how any tree can escape destruction. It is supposed by many, that these fires are spontaneous.

The extracting rosin from the *Shorea robusta* tree keeps a large proportion of that valuable timber in a very stunted condition, as the tree is always killed by the operation. This is a perfectly wanton abuse; for a tree, if allowed to grow large, would give the rosin equally well, and when the rosin has ceased to flow, might be cut down with equal advantage, as if rosin had not been extracted. The extraction of Catechu is managed with as little economy. The people, not only before the trees have acquired an adequate size, begin to cut them, but they even dig up the roots; yet it is probable, that one square mile planted with the *Mimosa*, which yields this drug, if divided into 20 equal portions, one of which should be cut every year, would supply 10 times the quantity, that is now made in the country. The rearing the silk called *Tasar* keeps the trees employed in a stunted condition. The soil fittest for the tree is a poor red clay, and the trees are so

pruned, that they are far from injuring the crops, which here thrive best on such land, namely *Sesamum* and the pulse called Kurthi. A very few square miles, regularly planted with the proper trees, would supply 10 times the quantity now raised, and not one acre of it need be fallow, oftener than was necessary to prevent the soil from being exhausted.

The Khajur in this district is an object of considerable importance. I have before noticed its great affinity to the *Phoenix* or date, and, after having compared the fruit and whole plant with the description in Kœmpfer, I am inclined to think, although it was considered by Linnæus as forming a distinct genus, that it cannot even be called a distinct species, and does not differ so much from the date of Arabia as a crab apple does from a pippin. The ripe fruit is exceedingly sweet; but is covered by so little pulp, that it would be unfit for preserving. The only difference I can observe is, that in the date the root is creeping, and sends up young shoots round the parent stock; but such I have never observed in the Khajur. If such a want in the latter does not depend on neglect of cultivation, the species may be considered as distinct, and there is no hope of improving our tree to an equality with that of Arabia, as no good date is there reared from seed: but if by care young suckers could be procured, then by a selection of these from the best kinds, by copious watering and plentiful manure, the quality of the fruit might be improved, and we might have proper dates, which would be one of the greatest possible improvements on the hilly parts of India.

A tree is fit for being cut when 10 years old, and lasts about 20 years more, during which time, every other year, a notch is cut into the stem just under the new leaves that annually shoot from the extremity. The notches are made alternately on opposite sides of the stem. The upper cut is horizontal, the lower slopes gradually inward from a point at the bottom, until it meets the upper, and a leaf at this point collects into a pot the juice that exudes. The season commences about the beginning of October, and lasts until about the end of April; after the first commencement, so long as the cut bleeds, a very thin slice is daily taken from the surface. In from two to seven days the bleeding stops, the tree is allowed an equal number of days rest, and is then cut

again, giving daily two sers (88 s. w.) of juice. In the afternoon the men cut the trees and fasten the pots, and in the morning they carry the pots to the shop, where it is to be re-tailed, and a man can manage from 10 to 16 trees. The juice when fresh is very sweet, with somewhat the flavour of the water contained in a young cocoa-nut. This is slightly bitter and astringent; but at the same time has somewhat of a nauseous smell. Owing to the coolness of the season it does not readily ferment. It is therefore collected in large pots, a little ( $\frac{1}{8}$ th) old fermented juice is added, and it is exposed to the sun for about three hours, when the fermentation is complete, and it sells at 1 paysa ( $\frac{1}{8}$  part of a rupee) for the ser, which is nearly  $\frac{1}{8}$  lb. avoirdupoise. A man therefore should daily collect about 4 anas worth; and his wages being  $1\frac{1}{2}$  ana, the retailer has  $2\frac{1}{2}$  anas a day on each man that he employs; but then he must pay the tax, amounting, so far as I could learn, to about one ana daily on each person employed, and he must also pay the rent on the trees, which usually amounts to  $\frac{1}{2}$  of the juice or 8 anas each tree for the season. A tree therefore gives annually about 64 sers of juice, or bleeds about 32 days. No sugar is made from the juice;  $\frac{1}{2}$  ser or a pint of the fermented juice makes some people drunk, and few can stand double the quantity. Mats for sleeping on are made of the leaves, and are reckoned the best used in the district.

The Tal or Tar is the *Borassus flabelliformis*, usually called Palmira by the English. Its stem is seldom applied to use, although few materials are more valuable for making good thatched roofs. The leaves are never used for thatch, but are made into mats, on which people sleep, and which are next in quality to those made of the Khajur. They are also used as a kind of umbrella to keep off rain. Although the juice is not so sweet as that of the Khajur, the wine, it is said, becomes stronger, and it ferments without addition, or without being exposed to the sun; but this is probably owing to the heat of the season, as it begins to yield juice about the middle of March, and the season lasts for two months. Trees may be had which will bleed throughout the rainy season, and the juice of such is used for fermenting bread. This palm is often planted, in rows, by the sides of roads, or round new tanks; but by far the greater part springs spontaneously from

seed scattered by the animals, which eat the fruit. Neither it nor the Khajur would however appear to be native plants; and, where found in the woods, may be always traced to former villages. The palm does not begin to flower until between 25 and 40 years old, and lives to an indefinite but very extended old age, far beyond the recollection of man. After it begins to flower it continues ever afterwards at the proper season to yield juice, as it is the flowering stem (spadix) which is cut, and its bleeding seems to debilitate the tree no more than if the flowers or fruit had been allowed to form, which the operation prevents. Three times a day a thin slice is cut from the point of the unopened spadix, until it entirely withers, and a pot is kept constantly suspended under it. New spadices shoot in succession, so that the tree bleeds constantly for two months, beginning about the end of April; and as I have said, a few straggling spadices occur throughout the rainy season. I think that in the account of Puraniya I have mistaken the season in which this juice is extracted, which I should think must be the same in both districts. It must however be observed, that in Bhagulpoor it is only the male spadices which are cut; but I am told, that after the fruit is ripe, in August or September, the female spadix may be cut, and would bleed without injuring the tree. A tree gives daily about 2 sers or  $4\frac{1}{2}$  lbs. of juice, worth about 2 paysas (each equal  $\frac{1}{8}\frac{1}{4}$  part of a rupee), that is, the tree, during the season, gives to the value of about 15 anas of Tari, and where cut for wine, each usually pays 8 anas to the landlord.

The fruits of a numerous class of Indian *Terminalias* are winged and dry, and I have no doubt that these kinds are of the same genus with the Chuncoa of America. Of these I have in this district observed four kinds. The first and most important is the Asan of the natives, which Dr. Roxburgh in his MSS. calls *Terminalia alata pilosa*. Where allowed to remain undisturbed, it grows to be a very fine tree, with a remarkably straight stem, and may be known at a considerable distance by its bark being dark brown, and cut into small squares by deep notches, vertical and horizontal. The same, however, takes place in a kindred species, the Moti of Mysore. The bark of both is burned, and the ashes serve in place of lime to chew with betle. The wood is reckoned strong and



durable ; and, although it does not take a polish, would for many purposes be very useful. The chief use to which the tree is however applied is to rear the Tasar silk, of which I shall here give some account. The tree abounds chiefly in the part of the district that is situated east from the Chandan, and between that and the Rajmahal hills, and there occupies as large a space as the bamboo does towards the west. The animal is reared by all castes, who inhabit these parts, but in general by the armed men employed under Ghatwals to preserve the peace of the country. With a view perhaps of securing the employment to themselves, they have established certain rules of purity, as they call it, which they allege are absolutely necessary ; and they allege, that any infringement would totally destroy the insect. Women, who are best fitted for such a work, are entirely excluded from it as totally impure, nor are they permitted to approach the place ; and while employed in this work, the men totally abstain from the company of their wives. Again most of the low vile castes are excluded by their appetites, abandoned to the gross impurity of animal food. The breeders eat sparingly, once a day, of rice cleaned without boiling, and seasoned only with vegetables. They are considered also to preserve their purity by never employing the washerman nor barber.

Concerning the method of procuring the seed cocoons, I found in the accounts of the natives the utmost difference. In Bangka it was stated, that the only good seed was procured from the forests, from whence the spontaneous cocoons were brought by people of wild tribes, were purchased by merchants, and distributed among those who rear the worms. From these cocoons three successive broods are reared, but those reared from the wild cocoons (Dhaba) are the best ; the others, Sarihan, Jarhan and Langga, gradually degenerate. At Tarapoor and Lakardewani it was stated that the kinds are quite distinct, that the good Tasar (Dhaba) is always reared from cultivated cocoons, some of which are preserved through the year for propagating the breed, and that the wild cocoons are only used for this purpose, when from accident and carelessness the proper seed is lost ; and the Tasar, which these give, is always of an inferior quality, but is of two kinds, Sarihan and Langga, the last of which is very in-

ferior, and is seldom employed. Each kind, according to these people, breeds twice in the year. In Tyezullahgunj again it was said, as in Bangka, that no seed was preserved through the year, that in the beginning of the season wild cocoons were procured, but that the silk which these gave was of inferior value, and that the cocoons of this brood were chiefly preserved for producing a second, of which the silk was of the best kind. These accounts are in direct opposition to each other, nor can I take upon myself to assert which is true, or whether any of them is false, although I am inclined to rely most on the account given in Lakardewani and Tarapoor; but it may happen that such different practices really prevail, and that the influence of them on the quality of the silk is quite imaginary: for I would observe, that at Bhagulpoor all the cocoons are usually sold indiscriminately as of the same value, and very often intermixed. The weavers indeed say, that there is a difference in the quality of cocoons, and that one kind (Dhaba) is more easily wound, and gives a larger quantity of silk, while the Sarihan produces  $\frac{1}{4}$  less, but it is of a better quality. The merchants who deal with the simple breeders endeavour probably to keep up distinctions, of which they avail themselves. They pay in advance for the whole, and give a very low price; but they no doubt are often defrauded by people who never fulfil their engagements.

Among other ridiculous imaginations concerning the insects propagated, as I suppose, to impress the people with an idea of their purity, it is supposed that a Tasar female moth will not admit the embraces of a male of the same paternal family with herself. The breeders however very judiciously leave the whole adjustment of this delicate point to the discretion of the females. The seed cocoons are placed on a large flat basket; and when the moths burst the cocoons, they are allowed to form such connections as they please. In from 15 to 20 hours afterwards the males are thrown away, and from 20 to 25 impregnated females are placed in a cylindrical basket with a narrow mouth, which is covered with leaves, and some leaves are laid on the bottom of the basket. In some places an earthen pot is preferred. On these leaves, in the course of the day, the females deposit their eggs, and are then thrown away, and the eggs are placed in small baskets made of the Bhela leaves. On the ninth day afterwards the

eggs are hatched; and the baskets on which they are lying are put upon a tree, over the leaves of which the young insects immediately spread. When they have consumed these, the worms are removed to other trees, and in 36 days from being hatched they begin to spin. In 15 days this operation is completed, when all the young branches are cut, and the cocoons are thus collected with very little trouble. The only operation at all troublesome is the removing the worms from one tree to another, and this might probably be avoided by putting no more worms at first on each tree than it should be able to maintain. The worms however must be watched, as crows and other birds and hornets are apt to destroy them. The whole space of time occupied by the two crops may be about five months, beginning about the first of July, and ending about the last of November. A great number of the cocoons preserved for seed burst, and these can only be sold for about half price. Those originally intended for sale are killed by being put in boiling water, and then dried in the sun.

In procuring food for these worms, the only trouble is to select a piece of ground on which the Asan tree grows, intermixed with few others. These latter, and all bushes ought to be removed, and all the large branches of the asan tree should be lopped near the stem, and young shoots permitted to grow; for these produce large succulent leaves fit for the worm. The worms are only applied to the same tree once in the two years, a whole year being necessary to allow the new shoots to grow.

The Bassia, mentioned in my accounts of Dinajpoor and Puraniya, is found in great quantities, both entirely wild, and allowed to grow like the palms, in a half-wild state, near the villages on the skirts of the forest. In the wilder parts it is called Mahul, but in the purer Hindi dialect its name is Mahuyz. It does not grow in any part of the district that belonged to the province of Bengal, and on the north side of the river there are only a very few trees. The Bassia grows to be a very fine spreading tree; and thinly scattered over the poorer fields of a red soil, where it seems to thrive best, its shade by no means injures the crops of Sesamum or pulse, which are those that thrive best on such soils. The timber gives tolerable planks, that are commonly used for making

doors and window shutters, because, from being preserved, the trees grow to a large size. The ripe kernels are eaten like almonds, but are not good. They also give an oil, four sers of kernels yielding one of oil. After being dried in the sun for some days, the kernels are beaten in a mortar, and then put in a common oil mill and pressed. In cold weather the oil is thick like Ghu; but in hot it becomes liquid. In most parts it is only used for the lamp, having a bitter disagreeable flavour; but amidst the forests the poor use it in cookery, and take out the bitter taste by boiling the oil, and while boiling, by sprinkling it with a little water. It is not sold, the poor who use it, make it on their own account. The most important part of the tree is its flower, which falls during the morning, after having expanded in the evening. These flowers being succulent, resemble round berries, and are filled with a thickish sweet juice, which would not be very disagreeable, had it not an uncommonly strong narcotic smell, worse perhaps than even that of hemp. Deer, however, monkeys, and other animals, are very fond of these flowers; so that the trees, where proper care is taken, require to be watched. The ground under the tree should be smoothed, so that the flowers may every morning be collected by sweeping. The flowers are spread on mats, or on a piece of cleared ground, and dried in the sun, and are then fit for sale. A tree gives from 5 to 30 sers (80 s. w.) or about from 10½ to 61 lbs. of dried flowers; but at Mallipoor it was alleged that were care taken to exclude deer and monkeys, double this quantity might be procured. Formerly, it is said, the flowers were wont to be sold at the tree for from 6 to 8 *mans*, or from about 493 to 246 lbs. a rupee; but in the year 1810-11 at Bangka, close to the forests, they sold at 1½ *man*; and in 1811-12, at Mungger, they rose to 1 *man*, while 1½ *man* is there considered as the common price. In most places no rent is taken for these trees, in others a trifle of a rupee for from 16 to 25 trees is demanded, and little or no attention is paid to preserving them, but the increase of price will probably produce a greater care.

The principal use of the Mahuya flowers is for distillation, of which an account will be afterwards given; but they are also used in diet. People in easy circumstances, as a luxury, fry the fresh flowers in butter, after they have been boiled

in a little water to dryness. In the southern parts of the district the poor are compelled to derive from this flower a portion of their ordinary nourishment. In common years, for about five months, they use partly grain, partly the Mahuya; but for four or five days in the month they eat the seed of Sakuya. In times of scarcity  $\frac{5}{12}$  of their whole subsistence is derived from the Mahuya,  $\frac{2}{12}$  from the Sakuya,  $\frac{1}{12}$  from the Odail root, and  $\frac{1}{12}$  from grain. A few other substitutes are used, as will be afterwards mentioned; but to no considerable extent. All these substitutes are very inferior to grain, and the people, feeding even on the Mahuya, which is the best, become weak and sickly. The fresh Mahuya flowers are boiled in a little water to dryness, and form a pulp, which is eaten cold with a little boiled pulse, if this can be procured. The dried flowers are boiled to dryness, and then beaten to a paste, which is eaten with some parched seed of Sesamum, if this can be afforded.

The Kend is one of the most common trees in the district, and has a very strong affinity to the Tupru of Mysore, but neither seems to have been described in such works as I possess. The fruit is eaten, and, when ripe, is said to be good; but it is generally brought green to market; and, to render it eatable, must be heated in a pot covered with embers. The tree flowers in June, and the fruit is not ripe until April. The common timber has the same qualities with that of Makar-Kend; but both, when allowed to grow large, produce a black heart, which is called Abnus (Ebenus). The Kumbhi of Mungger, and Kumbir of the southern woods, or Pelou of the *Hortus Malabaricus*, is pretty common. The cabinetmakers of Mungger employ it for boxes. It takes a polish, is of a mahogany colour, well veined, and is not very heavy. It does not resist damp, and splits with the sun; but, if kept dry, is pretty durable. Its fruit possesses a saponaceous quality. Its timber was formerly used for making the drums of the sepoy corps, and it is employed for wooden hoops. It is very flexible, and, on exposure to the weather, does not split.

The Kalamba Nambu of Mungger has oval notched leaves, generally blunt. The petioles are slightly winged. The fruit is oblong, but thicker towards the point, which is sharper than towards the stem, and is marked with many obtuse longi-

tudinal angles. It grows as large as the Jamiri, ripens in November, and has a fine acid juice. The Karna Nembu of Mungger has seldom any thorns, the leaves are generally long, egg-shaped, sharp pointed, and slightly notched. The petioles have a large wing. The fruit is as large as a citron, is shaped like a pear, but rather sharp at both ends, and is very rough. The juice is agreeably acid. It seems to come very near the *Limo taurinus* of Rumph. In the plant of Rumph, however, the juice is corrosive, and unfit for eating, which is by no means the case with ours; but Rumph's plant is in a state of nature, and ours is cultivated, which may account for this difference. The Naranggi of Mungger is the *Aurantium sinense minus* of Rumph (*Asiatic Researches*, vol. 2, page 113). It is a small sweet orange, the rind of which, when ripe, separates spontaneously from the succulent part. About the villages, a species of *Cedrella* is much esteemed by the cabinetmakers, and takes a fine polish. The flowers are used as a yellow dye.

The Galgal of Mallepoor is in spring a very beautiful plant, being covered all over with large yellow flowers, without leaves. It approaches very near to the genus, called *Stewartia* by botanists, but its seed is wrapt in a kind of cotton. Its wood is in no request. The sandal tree is found near some monuments of saints, at Bhagulpoor, and in the common dialect of the place is called by the same name exactly, which the English use. I am assured by a native workman of Mungger, that some years ago a tree of this kind grew near Pirpahar in that vicinity, and, having reached to about a span in diameter, was cut, and found to possess a very good quality. This is exactly the same tree with the sandal of Malabar, which by modern botanists has been called *Sirium myrtifolium*, although it no doubt is the tree which gives the most common and valuable sandal of commerce. The pomegranate is common. The apple-tree grows in a few gardens, and produces apples, little larger than a nutmeg, and not absolutely so bad as crabs. In the gardens of Europeans the peach is common, and there are a few in those of the natives. It by no means thrives so well as in Bengal. It is too late of ripening, so that the showers of spring usually rot one side, while the other is green.

The Khayer, or *Mimosa Catechu* of this district, exactly

resembles that which I saw in Ava, and differs in a few trifling particulars from the tree of Morang, which gives a similar drug. The wood is of no use, except as yielding this extract, and in this district the roots seem as much used as the stems. The number of trees is very great, especially in arid barren places, in which chiefly it seems to delight; but it is here very rare to find a tree of it so thick as the arm, which would seem to imply, that the quantity of Catechu prepared was very considerable. The Catechu made here is very inferior to that of Morang, owing partly to the slovenly manner in which it is prepared, and partly to a general practice of adulteration. The chips are boiled in small earthen pots, until the Catechu is extracted, and the decoction is then inspissated in a separate vessel, and poured thin on a bed of leaves, where it is allowed to dry. It is then beaten in a mortar with a little warm water, and formed into balls, during which operation, a kind of earth, called Makar Mati, afterwards mentioned, is generally added to about one-fourth of the whole weight. A little called Papri is made into small cakes, without adulteration. The people work from Kartik to Phalgun (middle of October to middle of March), but an interruption of two months at least arises from the rice harvest, so that each man may make 3 *mans* or 270 lbs., worth to him 6 rs., and to the exporter 18. The maker pays a rent of 4 anas a year, one-half for permission to cut Khayer, and one-half for permission to cut fire-wood. 1350 men make about 4000 *mans* of Catechu. The wood of the Babar is much sought after for carts, especially for the naves of wheels. The gum is sold by druggists.

The *Bauhinia purpurea* is a small tree of little use, but is exceedingly ornamental; the flowers before they expand, are used as a common vegetable. The *Butea frondosa* is very common in the woods on both sides of the Ganges, wherever the soil is rich and moist, without being liable to inundation. Its bark is beaten to a kind of oakum, which is used for caulking boats. Its timber is useless. In the woods it is reckoned the best tree for rearing the Lac insect.

The Satsal is reckoned the most valuable timber in the district, and is that chiefly employed by the cabinet makers of Mungger. The timber admits of a good polish, resembles very dark mahogany, and is durable. In the forests of this

district the Bhela or *Semicarpus* is abundant. It is supposed, that some people if they approach this tree, are liable to sores and humours; but the opinion is accompanied by several ridiculous circumstances, which render the whole suspicious. The fruit is sold in the markets as a medicine, and for staining linen. The timber is only applied to the most coarse purposes.

The mango has been extended beyond all reasonable bounds, so that the produce of a bigah (one-third of an acre) planted with these trees, and containing perhaps 20, is not in general estimated at more than 2 or 2½ rs. In general the fruit is very bad, and it is late of ripening, so that the season is short. Much of the ripe juice is preserved by drying it in the sun. This preserve is here called Amawat. Green mangoes are also preserved by cutting and drying them in the sun; this preserve is called Khatai. A few are made into Achar; when green they are split, stuffed with salt, mustard and aniseed, and then put in mustard-seed oil. The wood is in much request for packing-boxes, doors, chests, and other coarse work, but notwithstanding the numerous plantations, and that there are many old trees of great size, the wood can scarcely be procured, as the Zemindars, especially about Mungger, will not consent to their being cut. In this district mats are seldom, if ever, made of the stems of *Cyperis* or *Scirpi*.

The Chehar or Tehar is perhaps the greatest twining tree (*Funis silvestris*, Rumph.) of India, often exceeding a foot in diameter, and involving many trees in its grasp. It is a species of *Bauhinia*, of which I find no traces in authors. The legumes are roasted in the ashes, and the beans eaten. The leaves, being very large, serve as platters; and strips of the bark are used for ropes and bow-strings. The mountaineers eat wild yams (*Dioscoreas*); but such are not in use at Mungger.

The *Butea superba*, in spring is the greatest ornament of the forest. The seeds give an oil, which among the forests is used both for the lamp, and for anointing the body. They are parched before the oil is expressed. The Lac insect is sometimes reared on it. The bark is used for ropes, &c.

MINERALS.—The country respecting its minerals, may be divided into five remarkable spaces. 1st. The Rajmahal



range of hills, extending from a little below Kahalgang to Udhawanala along the Ganges, and from thence south to the extremity of the district. 2nd. The Mungger range, beginning with a narrow point at that fortress, and stretching towards the south into the Ramgar district; but from its centre it sends towards the east a long chain, which is of the same nature, and reaches to Jathaurath. The hills of Gidhaur are of exactly the same mineral appearances. 3rd. The space included between the two former ranges, and south from the above-mentioned chain, that is sent east from the Mungger hills. 4th. The space north from the same chain. 5th. The space on the north side of the Ganges, which consists entirely of earth and clay, and in this part of the report requires little or no attention; as it differs in nothing remarkable from the adjacent parts of Puraniya already described. I may only observe, that there, as well as in most low parts of the district, a black clay fit for the potter's wheel is abundant, and in many parts the vessels made of such are strong, and considered as preferable to those made of the reddish or yellowish clays, that are most commonly found in the higher parts of the district; this, however, I believe depends on its containing small siliceous pebbles; where it contains none of these, the black clay makes very brittle ware.

It is not to be imagined that these divisions are exactly defined by certain lines, which separate totally the productions most peculiar to each from those belonging to another division; such exactitude is never observed in the works of nature; but in the mineral productions of each division there is a great predominance of certain minerals, although detached portions of the minerals of another division are occasionally interspersed.

*Minerals of the Rajmahal cluster of hills.*—This is the only part in India where I have seen a great mass of stony matter disposed in horizontal strata; nor is it everywhere in these hills that this position can be traced; it is chiefly observable on their higher parts. There it may be in general traced, wherever any considerable excavations have been made, or wherever there are abrupt precipices. Such however are not common; for although the hills are steep, they are not broken by great rocks; and the stones by which their surface is covered, are generally small detached masses.

Towards the roots of the hills, again in many places the rocks are absolutely devoid of visible stratification.

The great mass of these hills consists of what appears to me to be the variety of Trap, called *Whinstone* in Turton's translation of the *Systema Naturæ*, (vol. 7, p. 127); although I am not clear, that it is not a compact lava, (vol. 7, p. 128), between which stones I know of no proper limit. It is found in detached masses on the bank of the river at Rajmahal and Sakarigali; but both there, and in most other places, no appearance of stratification can be observed. Its horizontal disposition may however be very clearly discerned at the iron mine near Partapoor, in the division of Favezullahgunj, where it forms the horizontal floor and roof, between which the ore is contained.

Very nearly allied to the above is what is called hornblende in mass, which differs chiefly in being much softer, although it still retains a great degree of toughness, and resists the action of the air much longer. It takes a tolerable polish, although inferior to that of marble, with which however it is often confounded. On account of the ease, with which it is wrought, and of its durability, this stone is in great request among the natives. At Paingti it is found in rounded masses immersed in a soft substance, evidently consisting of the less durable parts of a rock of the same nature, now gone to decay. In some places this rotten mass has lost all traces of its origin, and has become a deep red soil, in which masses of the hornblende are found imbedded. Masses of several feet in diameter and quite sound might be procured; but the natives content themselves with smaller ones, which they cut into the stones on which they grind the materials for making curry, and many other substances. On the hill named Taruya, near Paingti, has been a quarry of this stone, from which great quantities have been taken, it is said during the Mogul government. The place is conveniently situated, and very fine masses might be procured for building, no part of the rock having as yet decayed.

The two stones hitherto described, whin and hornblende, were by Wallerius classed together and called hornstone (*Lapis corneus*), and both the arrangement and nomenclature seem excellent, as both stones possess great toughness without being very hard, and as their colour resembles that of a

black horn. Modern mineralogists, however, in the progress of their science, which seems both in arrangement and description to be retrograde, have applied the name hornstone to other minerals, which have little or no resemblance to horn, and which are flint in the mass or rock. At Sakarigali, close by the edge of the water in the winter, is a curious horizontal layer of this stone not above a foot wide, but exceedingly difficult to break. It is filled with the exuviae of a fern. It is divided by fissures into rhomboidal masses, from 6 to 12 inches in diameter.

A substance, which naturalists include among the clays, but called Khari by the natives, is very generally diffused through these hills, and several quarries of it have been, and still are wrought. When perfect, it is a substance somewhat like chalk, but is not calcareous. Women in many parts eat it, when breeding, as in Bengal they eat baked clay, and some of it for this purpose is exported to Moorshedabad. Boys when taught to write, rub it with water into a white liquid, with which they form letters on a blackboard. Native painters and gilders cover with this liquid the wooden work, on which they are about to operate. The best Khari is white, and although little harder than chalk, seems to be formed of siliceous stones in a state of change. Among these hills I have found no specimens of the flinty hornstone, yet I think it probable, that formerly much has existed, for every where there abounds a kind of imperfect Khari, which to sight has every external appearance of the real kind, but is too hard for use, and in fact is in an intermediate state between the proper Khari and flinty hornstone. Farther in a piece of this imperfect Khari, which I found on the road between Sripoor and Majhuya, are evident traces of vegetable impressions, which serves to connect its origin with that of the hornstone of Sakarigati above mentioned. Still farther in some pieces of imperfect Khari, I can trace the gradations from that stone to a kind of granular quartzose concrete, very common in these hills. Although the best Khari is white, yet much of a proper softness, as well as of the hard and improper kind, consists of various parallel layers of different colours, sometimes plane, at others very curiously waved. The colours are white, red and dirty yellow.

On a hill called Kharipahar, the farthest south on the

range, now described, is by far the best quarry. It is covered by a horizontal stratum of stone about three feet thick, under which it extends to an unknown depth; but in their operations the people have not exceeded six or seven feet. It is disposed in vertical plates from one to three inches thick, and separated by an ochraceous matter, among which I observed traces of mosses. The plates run north and south, and are of various shades of white, but the whitest and softest alone are selected for market, and freed from ferruginous matter. This Khari seems to be what naturalists call a porcelain clay, and of very fine quality, and perhaps as ballast might be sent with advantage to Europe. This quarry has been long wrought; and although situated on a hill belonging to the southern tribe of Mountaineers, and cultivated by them, has been considered as the property of the Virbhum Rajas, and on the sale of their estate went, as a separate lot, to Lala Gourhari, who pays for it 29 rupees a year. He sometimes has wrought it on his own account, and sometimes has let it to a manager. Whoever works it, gives to the hill people, who quarry,  $2\frac{1}{2}$  Sers of rice for each ox-load of *Mans*, and this he sells at Moorshedabad for about  $1\frac{1}{2}$  r. He annually digs about 1000 *mans* ( $58\frac{1}{2}$  s.w. a ser), each weighing rather more than 60 pounds.

About three miles farther north, on a hill called Porgang, is another quarry of Khari, which I did not see. When I was in the vicinity, in Dec. 1810, it had been only lately discovered, and for about six months, during which 500 *mans* had been procured. At Mansa Chandi, a small hill near Phutkipoor, was a mine of Khari, which had been dug from a kind of sloping gallery running through a curious argillaceous stone, that will be afterwards mentioned; but the deity of the hill, about 40 years ago, was supposed to have taken offence at the people prying into her secrets and the work was stopt.

On the hill called Gadai Tunggi at no great distance from the above, and belonging to the northern tribe of Mountaineers, is a fine quarry, now wrought. The hill forms the NE. corner of the range overlooking Rajmahal, and consists mostly of whin, but the surface in some places is covered with shaggy fragments, that appear to me to have undergone the action of fire. The Khari is only covered by red earth from 18 to

24 feet thick. Through this earth the workmen dig a sloping passage, open above, and perhaps four feet wide, until they reach the Khari, when they dig a gallery into this substance, and take out as much as is wanted. Every year this must be repeated; as in the rainy season the water fills up the passage, and brings down the roof. A merchant hires the hill people to work, and, on account of the risk, gives them four anas a day. The Khari here is softer, and more unctuous than at Kharipahar, and being mostly in layers of different colours, is chiefly used as a medicine. In fact it is what naturalists call Bole, or perhaps Lemnian clay; for in water it does not fall to powder. On one piece I saw somewhat like the appearance of a bivalve shell, but, if such, it was so much decayed, as to render its nature uncertain.

The last quarry, that I shall mention is on the hill called Modiram, which is a little south from Kahalgang, and forms the north-western extremity of the range, which I am now describing. This quarry is a porcelain clay, being of a less unctuous quality than the last; but on being put into water, it falls instantly to powder. It is not however so pure as that of Kharipahar, being less white; but its colour is an uniform pale ash, nor is it intermixed with ferruginous matter between the layers; and being close to the river, its price at Calcutta might be a trifle. It has been wrought in two places, pretty high up the hill. The stratum in each has been from three to four feet thick, perfectly horizontal, and extending into the hill for an unknown length. The roof and floor in both are imperfect harsh Khari. The natives dug into the quarry, without leaving pillars, to support the roof, until that fell. About three years ago, they went to the upper quarry, now wrought, and have made a large excavation, perhaps 20 feet each way, and they will continue to enlarge it, until the roof falls, when they will look for some other place. The leaving pillars to support the roof, is a mystery far beyond their present attainments in the art of mining; and, when mentioned, was received with numerous frivolous objections.

Very nearly allied to the above Khari, and frequently indeed forming alternate layers in the same mass, of the more imperfect kinds, is the strong substance called by the natives Geru, which differs only from Reddle in being harder. It has not been found in larger masses, and is in general so much

intermixed with matters of another colour, to which it firmly adheres, that it is never sought after in quarries. Small fragments, that are found scattered in the beds of torrents, and which, in the progress of decay have been separated from the other matters, with which they were united, are sometimes collected near Kharipahar, and used as a paint, for which they seem well fitted.

I have already said, that some of these Kharis probably owe their origin to sand-stones, and of these there are in this district a great many. Some are horizontal, and of these some seem to be composed of the debris of siliceous rocks united together, partly without any visible intermediate cement, as on the ascent to Kharipahar, and partly by a cementing matter, in which little masses of quartz are thickly interspersed, as the stratum, which covers the quarry of Khari on the same hill: others again seem to be the mere sand of the river united by some unknown process of nature, as at low water mark under the hill at Paingti. In other sand-stones however there is no appearance of stratification, horizontal or vertical; and such seem to me to be granitic rocks in a state of decay. The various stages may be traced at Patharghat, under the temple of Bateswar, and the most complete specimen may be observed on the Pirpahar, which is a few miles above Rajmahal.

Sand-stones in many parts of the world form the best material for building; but in this district, so far as can be judged, from what appears on the surface, they are of little or no use. The only one, that seems to have been wrought, is on the face of the hill above Patharghat, where the edge of a horizontal stratum of concrete siliceous stone has been smoothed, and carved with numerous figures, probably of considerable antiquity. The stone is certainly very ill fitted for sculpture; but seems to resist the weather, and probably would answer well in building. A stone of a similar nature, but much more perfect, is found on the summit of Kangreswarikatok, which I take to be the crater of an extinguished volcano; but its situation is too distant from water carriage to admit of its being used. Besides the granites and vertical strata in a state of decay, I must mention, that under the northern and southern extremities of this range, at Patharghata and Kharipahar, there is large grained grey granite

with blackmicaceous or shorlaceous spots. At Patharghata the rock is washed by the Ganges, and fine masses might no doubt be procured. In the very southern extremity of the division, on the Duyarka river, is a fine rock of solid granitel consisting of black shorl with many small specks of white quartz. It may be doubted however, whether any of the primitive rocks form a part of this eastern range, as they are found just on its extremities, and may belong to adjacent mineral structures.

I here observed several breccias, with an argillaceous cement, containing rounded nodules of different kinds. One of these was in the bottom of the cavity in Kangreswarikatok, a place, which I take to have been the crater of a volcano. Another was on the hills between Phutkipoor and Mansa Chandi, which consists chiefly of what appears evidently to me to be a slaggy matter, that has undergone the action of fire; but, before I proceed to treat further on such slags, I must observe, that south from Mansa Chandi, at Jajpoor on the borders of Virbhum and Murshedabad, there is a hill, which consists chiefly of a clay readily cut with a knife; but which on exposure to air becomes somewhat hard, and is evidently of the same nature with the brickstone of Malabar, which I have described in my account of Mysore. It is however vastly inferior in quality. This clay has a very strong resemblance to the slaggy stone of Mansa Chandi, and some parts of it, that have hardened into stone, are scarcely distinguishable, except by wanting the slaggy appearance. They must however be considered as a kind of breccia, as they contain certain ferruginous nodules in an argillaceous cement. To return to the slaggy matter, which I consider as having undergone the action of volcanic fire; I cannot say, that I saw it any where, very decidedly, forming great masses like currents of lava; but on a great many places, I found it in detached blocks lying on the surface; such as on Pirpahar near Rajmahal, on Chaundipahar, on the road between Sripoor and Majhurya, and on different parts of Kangreswarikatok, which I consider as the old crater. On Mansa Chandi and Gadai Tunggi, I am inclined to think, that the masses were united into solid rocks; but, without digging, that could not be ascertained. On the edge of what I took to be the crater of Kangreswarikatok, I found a stone, which appeared to me

to be volcanic sand conglutinated; and the resemblance between this stone, and the siliceous concrete, that is often incumbent on the Khari, is very strong. This, together with the circumstance of the vein of Khari contained in the slag of Mansa Chandi, seem to imply an extension of the operations of fire over the whole of this mineral division of the district.

I have said, that Kangreswarikatok, on the western extremity of this range towards Parsanda, appears to me to have been the crater of a volcano. It is a conical hill about 300 feet in perpendicular height, and very steep on all sides. On reaching the summit you find, that it consists of a great cavity surrounded by a thin ledge, and descending to very near the level of the plain. The ledge now is of unequal heights, having in some places given way, especially towards the east, where a gap, about 30 yards wide at the bottom, gives access from the outer plain with very little ascent, and allows the water from the cavity to escape. Towards the summit the inner surface of the ledge consists of abrupt rocks, but the bottom is filled with the debris of the portions of the ledge, that have fallen. Much slaggy matter is to be found both on the outside of the hill, and in the bottom of the cavity.

I was informed by Isfundiyar Khan, a fine young man, assistant to the Suzawul, who manages the hill tribes, that about five years ago he heard of a smoke, that issued from a hill named Chapar Bheta, about seven coss SE. from Karariya. He visited the place, which was not hollow, and consisted, as usual of earth mixed with a great many fragments of stone. In the day it was not luminous; but a thin smoke issued continually from a space about 8 or 10 cubits in diameter. He heard, that in the night it was luminous, but he did not see it in that state. On throwing wood upon the hot place, in a few minutes it took fire. These appearances continued for about three years, and then stopped.

In this range of hills I saw no traces of pyrites, coal, nor other inflammable substance. I have however been informed, that at Motijharna, on the hills near Sakarigali, there is a stratum of coal; but this information I also received long after I had been in the vicinity, and from a person, on the accuracy of whose accounts, I had several opportunities of knowing, that no reliance could be placed. Besides the slaggy detached



masses, that are scattered over the surface of this mineral range, there are two other classes of sporadic bodies, that are very common, not on the higher hills, so far as I saw, but at their roots, or on very low hills, or very often on the plains, that are interposed.

The first of these sporadic masses, that I shall mention, are siliceous, and are usually found scattered over surfaces, intermingled with fragments of whin, slag and imperfect Khari, and I suspect owe their origin to these bodies under a fusing heat. I found them at the bottom of Gadai, Tunggi, and Chaundi, near the iron mine of Partapoor, but above all on the road from Sripoor to Majhua, for almost the whole of its extent, which is about 14 miles, just in the centre of the northern part of this mineral range. Many transitions, or intermediate states, between the three substances, to which I have above alluded, and the more perfect siliceous nodules may, I think, be observed. When perfect, they are more or less diaphanous, or even transparent, and many of them are crystallized. Some of their substances are uniform, others are in various coloured layers, but in general without the smallest interruption of continuity. These layers are sometimes parallel, sometimes concentric, and several nodules with concentric layers are often included in one mass. Many of the masses are covered with stellated pits, as if they had formerly been corals; but the crystallized internal structure of some, that are thus pitted on the surface, seems to prove, that the appearance is not owing to the impression of animal exuvizæ. The crystals are very various. In general they are clusters covering the surface; but in others they are confined between parallel plates; while in others they shoot from the inner surface of a smooth cylinder, and fill its cavity; finally in others they form through the substance of the nodule very curious angular cavities.

The other kind of sporadic masses, scattered on the surface of this mineral tract, is calcareous, and consists of nodules called Ghanggat. In some places these nodules are small, lie on the surface, so as to cover it entirely, and prevent vegetation. In others they are imbedded at some depth in a thick red soil, through which they are scattered at various depths. Their surface is white, and very irregular, and their shape is very various, often branching out like corals. They

are exceedingly hard, and within of a compact structure, and are entirely similar to the calcareous nodules found in the south of India, which I have described in my account of Mysore. In the interior of the district they are generally found on the surface; but towards the banks of the Ganges are most usually immersed in the earth, and in both are used for making lime; but it is of an inferior quality, and is not white nor fit for the outside plaster, with which walls are encrusted; but answers well enough for mortar to connect the bricks. On the hills of Paingti and Sakarigali considerable quantities are burned.

This calcareous matter seems to me to be a kind of tufa, and to have been once in a soft state. On these detached nodules indeed no impressions can be traced, and there is strong reason to think that they are now forming, as it is alleged by the workmen, that the same earth from which they have been taken, after a lapse of some years, is found to contain new ones. But farther, the very same calcareous substance, of which these nodules consists, is found in very large solid masses, in which it seems to have flowed over the surface of the stony matter, and to have involved many detached portions, or to have lodged on the surface of a rock, into the crevices and pores of which it has penetrated, so that the two masses cohere. The external surface of such masses is as unequal as of that of the nodules, and resembles that of some corals.

At Paingti two very distinct kinds of this tufa in mass may be traced. One exactly resembles the stone of Manihari described in my account of Puraniya, and which, when I wrote that, I considered as a porphyry changed into calcareous matter; and in fact it so exactly resembles the argillaceous breccia found in the hills south-west from Phutkipoor, that I have very little doubt of its having been once of a similar nature. In this are involved many masses of the hornblende in mass, which I have mentioned as constituting the greater part of the hills near Paingti. The masses of hornblende are of various sizes, from that of an apple to that of the head, and have been rounded by the progress of decay, before involved in the calcareous mass. The other kind of solid calcareous mass found at Paingti consists of the common tufa, involving pebbles of various natures, but mostly of the

Geru, or indurated reddle, that I have formerly mentioned. At Patharghat, again the same calcareous substance has flowed over a stratum of the red concrete sandy matter mentioned as found there, and entering its crevices, has united with it into one mass.

This calcareous matter at Paingti has also formed a very different substance from the above-mentioned tufa, or at least has in decay suffered a great change of appearance, forming a friable granular substance; but it retains traces to show that it has formerly resembled that, which I suppose to have been changed from the argillaceous breccia. This is a very considerable mass, into which the cave under the old Mudur-sah, described in the topography, has been dug.

In this portion of the district the quantity of metallic matter in the form of ore is not very considerable, and it is iron alone that has been discovered. The richest mines of Virbhum are close adjacent to its south-east side, and probably are connected with it in mineral affinity, for mines were formerly wrought at Virkati in Suttangunj, and at Kalidaspoor in Ambar, both on the eastern side of this division; but these have been abandoned, and are now entirely choked, so as to be inaccessible. The former were situated in a stratum strongly resembling the indurated clay of Jaypoor above-mentioned; and at Jaypoor I found plates of iron ore, forming a mass contiguous to that clay, and separated from each other by argillaceous matter strongly impregnated with iron. They are not attracted by the magnet, have a somewhat conchoidal fracture, very fine compact grain, no lustre, a very dark reddish brown colour, and red streak.

The finest iron mine in the district is on the hill named Ramkol, a little south from Pantapoor, which I have already had frequently occasion to mention; but this also has been abandoned, from the slothfulness of the people. The mine is a horizontal stratum, some way up the hill, running to an unknown extent between two solid masses of whin or trap, which compose the hill. The stratum of ore was said to have been about seven feet perpendicular thickness; but, having been wrought exactly in the same manner as the quarry of Khari on Modiram, the roof has fallen, and the exact dimensions cannot be ascertained. The whin immediately adjacent to the ore is decayed, or as the natives not unaptly say, is

dead, which rendered the precaution of pillars still more necessary. The ore is of two natures. In the upper part of the stratum it is softest as in a state of decay, is called Laliya, and is attracted by the magnet. In the under part it is harder, is called Kariya, and is not attracted. This is said to be the best ore, although it would appear to be specifically lighter, and should therefore contain least metal. Both are black with a common lustre, and contain small grains and dots, which to me give an appearance of its having undergone fusion. This is probably the only mine in the district which Europeans would consider worth working.

In this part of the district, as well as in the third of its mineral divisions, there is a very common appearance, which I think may possibly arise from ferruginous vapours issuing from the earth. In certain places all the fragments of stone and pebbles, that are lying on the surface of the earth, are covered with a kind of brownish enamel, quite thin and superficial. The stones thus covered are all of different kinds, nor does any one in the same space seem to escape, while similar stones at a little distance, are in no manner affected.

In September 1810, at Masdharipahar, about 10 coss east from Kalikapoor, in the territory of the northern tribe of mountaineers, a considerable space of the surface of the hill, said to have been about 40 yards each way sunk downwards, leaving a cavity 10 or 12 cubits deep. The cavity at first was filled with water, but soon dried. The soil was a red clay mixed with many fragments of stone. The intermediate country was so inaccessible, that I could not find means to visit this curiosity.

*Minerals of the western range of hills.*—In the former division I have said, that the most predominant rock is of the nature of whin or trap, and quartz is there rather an uncommon ingredient, at least in masses of a great size; but here a large proportion is quartz, and a still greater kind of rude jasper, or petrosilex, called hornstone by later mineralogists; and these two siliceous stones run so into one another by various gradations, that it is difficult, if not impossible to say, where the one begins, and the other ends.

It is, I imagine, difficult to say, that these hills are in any degree stratified, although they sometimes assume an appearance of that form. In general the siliceous rocks are inter-

sected by a vast number of fissures horizontal and vertical, cutting them into masses approaching to the form of cubes and parallelepipeds; and, when they are exposed to the weather in a state of decay, these masses divide into layers somewhat like those of wood, especially if the mass is exposed on an abrupt vertical surface; but if the surface exposed is horizontal, and level with the earth, the layers more resemble slate. In some places the vertical fissures, extending the whole depth of a perpendicular rock, give somewhat the appearance of basaltic columns, which may be especially observed in the magnificent recess called Marak. about 15 or 16 miles southerly from Mungger; but in fact, so far as I observed, there is nothing really columnar in the district. These hills are particularly distinguished from those of Rajmahal by their rugged nature, vast masses of naked rock projecting everywhere on the surface, and forming precipices of great height and abruptness.

The form which the greater part of this siliceous stone assumes, is that which I have called rude jasper, or petrosilex, the hornstone of modern writers, for although these stones are considered as different, yet in the specific characters which are given, there is, as often happens, no real difference. If we take the character of Wallerius, that petrosilex is found only in veins, or detached masses immersed in rocks, and that jasper forms whole rocks, then undoubtedly our rock is a jasper; but it in general departs very far from the appearance of what is usually called such. It is a rock striking fire copiously with steel, with a large conchoidal fracture, forming when broken sharp edges like a flint, and its fracture has a rough, earthy appearance, being composed of very fine grains. In most parts it is of different shades of white or ash colour; but in others it inclines to livid, and still more often to red, but it is seldom that the redness extends over a whole rock, it is generally confined to layers alternating with others that are parallel and white, or it is confined to spots or flakes on a white ground. Such more resemble the stones commonly called jasper; but whether it could be wrought, or take a polish, I cannot say, having been unable to procure a workman.

This jasper or hornstone sometimes has larger grains, so that each is very distinguishable to the naked eye, and then

it approaches near some of the quartz, which becomes granular; but there are other stones, which are a kind of intermediate between the two species, where a mealy or arid quartz approaches very near to our jasper, and there are still others which would seem to be composed of small portions of the two stones huddled together, and firmly united to form, what naturalists call an aggregate, as will be afterwards mentioned.

The quartz, in its most perfect form, consists of a substance approaching to glass, the conchoidal appearances on which, when broken, are very minute, and are known to differ from the former by every one who has taken the pains to compare the appearance of a piece of broken glass with that of a flint. The quartz, of which also there are many rocks, is sometimes almost pellucid like glass, sometimes white, sometimes red, or stained with red just like the jasper, and sometimes livid. Most of it has a fat unctuous appearance; but some of it approaching to the jasper, has dry earthy-looking particles; but, when broken, wants the large convexities, that distinguish that stone. Again, other portions consist of small grains, united together, and some of these have the fat appearance, while others in the same stone are mealy, and thus form what the mineralogists call an aggregate. The quartz again is very often mixed with extraneous matter, and especially with what is called mica, which shines like gold or silver. When this is in very small quantities, thinly scattered through the body of the quartz, the rock may be considered as simple; and among the whole quartz of this division very few masses of any size could be found, in which a few specks of mica might not be shown; but, when the stone consists of some particles of quartz and others of mica heaped together, and closely united, these particles form what is called an aggregate, and I shall proceed to treat of these, after mentioning, that mere quartz is so full of fissures that it does not cut for building. The fort of Gidhaur is indeed, in a great measure, built of it, or of the rude jasper from the adjacent hill; but the masses have not been squared by the mason; the parallelopedids, as rudely formed by nature, have been employed.

To return to the aggregate stones, both what I have called granular quartz, and granular jasper petrosilex or hornstone,

may be considered as an aggregate; although it is usual to confine that term to rocks, in which more than one kind of matter has been aggregated. When the stone is compounded of glassy quartz, intermixed with mealy quartz or hornstone, which in such cases I do not know how to distinguish, the term will be more readily admitted. In this part of the district there are many such rocks, and they are sometimes coloured in the same manner as the jasper. In some cases the mass consists of thin alternate layers of this aggregate, and of simple fat quartz, as on the detached hill called Khejuri, a little south from Tarapoor.

I have already mentioned, that large masses of quartz, which do not contain any mica, are seldom found; but, when the mica and quartz are, as it were, intimately combined in minute parts placed parallel to each other, they form a stone which has been called schistose mica, and on the hill Rauta, a part of the transverse chain reaching to Jathaurath, may be found stones in all the intermediate stages from pure granular quartz to the perfect schistose mica. A little east from Rauta, near a hill called Barai, this last substance is found in a considerable mass, forming a small hill called Barapahar, and is wrought for making the stones of hand-mills. It is by the natives called the Dudi stone, and is divided into irregular trapezoidal flags, separated from each other, first by vertical fissures, which run east and west, at from two to four feet from each other; secondly, by other vertical fissures which cross the former at right angles, generally at greater distances; and finally by horizontal fissures, at the distance of from six inches to one foot; but these flags are so much shattered by subordinate fissures, that solid masses, fit even for making the stone of a handmill, cannot be every where procured. This stone cuts readily with a chisel, and does not readily tarnish in the air. It has a pale greenish hue from the mica, perhaps approaching somewhat to the nature of chlorite. In some places it is stained red. The same kind of stone is found at Tahuyar Nagar Ghat, in the same vicinity, but it is not wrought.

Where the aggregate consists of two distinct matters, mixed together without any apparent order, it is usually called a granitel, and some such are found on the hill Rauta above mentioned, especially one seemingly composed of quartz

and chlorite; one composed of black very heavy shorl, or perhaps micaceous iron ore, with small spots of quartz; and finally one composed of white quartz, with a smaller proportion of the same black matter. These latter aggregates may be perhaps considered as adventitious in this division of the minerals, as they are on the boundary of a territory abounding in such, and quite different from the general mass of which I am now treating.

The only one which I consider as properly belonging to this mineral range, is a stone composing the small hill called the Kamuya (working place) of Laheta, 15 or 16 miles southerly from Mungger. It has been long wrought for the stones of hand-mills. The quarry is on the southern declivity of the hill, runs nearly east and west, and has been opened in different places for a considerable extent. The excavations are now pretty large. One of them, the largest that I saw, might be 200 feet long, 20 wide, and 12 deep; but so irregularly and unskilfully wrought, and so clogged with rubbish, that the proper extent of good stone is not readily determinable; and this good stone is bounded on each side by kinds, which in the eye of the mineralogist, scarcely differ; but which the workmen reject as too hard and difficult to work. The workmen take a piece suitable for their purpose, wherever they can find it most easily, cut it into shape on the spot, and then look for another, until the whole quarry is so filled with rubbish that no more mill-stones are procurable. Pioneers are then employed to clear the quarry. This is also choked with large masses, which the workmen avoid as much as possible, as being troublesome to break. Fine stones for building might therefore be readily procured, and it seems to be an excellent material, which cuts readily with a chisel. It is an uniform aggregate, without a tendency to schistose structure, and consists of grains of glassy quartz, united by a greenish grey substance, which has no lustre, and might be perhaps considered as of the nature of powdery quartz or hornstone; but its colour is against that supposition, and in many places, I think, I can trace the foliated appearance of mica. It contains some small red spots, which seem to me to have arisen from the iron of the mica when it is decayed, having collected in the form of ochre. If wanted for building, the part of the stone above



the quarry, which is rejected by the workmen, as wanting fissures to facilitate its division, and by them called Korra, would be found the best, but its distance from the river is perhaps too great.

The siliceous matter of this division of minerals also has some tendency to form the kinds of clay called Khari, of which there is a considerable quarry on a hill south-west from the hot springs of Rishi Kunda, but which I could not visit. It is of an uniform bluish grey colour, but becomes white when powdered. It has a soft greasy feel, does not readily fall into powder when put in water, nor does it adhere to the tongue. It is chiefly used for writing and painting. From the unctuous nature of its feel, this might be suspected to belong to a class of minerals, that will be soon mentioned; but I think, that on the banks of the Mon, near the hot springs of Bhimbandh, I found the petrosilex in a state of decay, advancing towards the formation of such a substance; and at Amjhor Ghat, nine or ten miles from Mungger, I saw a red grained siliceous aggregate, evidently in part changed into a kind of Khari, called there Parori Mati, which is used by pregnant women as a medicine.

But farther, a Khari used in writing, is found on a hill called Geruya. It is a stratum of an unctuous substance, which cuts smooth with the knife; and although on the face of an arid hill, retains some moisture, even in March. When dried, it adheres to the tongue, and instantly, on being put into water, falls to powder. It is of a fine white colour, veined and spotted like the siliceous rocks, between which it is found. These rocks have a strong resemblance to the argillaceous breccia, mentioned in my account of the first division of minerals, as being found near Phutkipoor; but its cement is most evidently siliceous, and it contains veins and nodules of quartz, as well as nodules of other substances. The whole has more or less of a slaggy appearance, and some of it has, in my opinion, most clearly undergone the action of fire. There is, however, nothing about the hill that resembles a crater, and it is quite sporadic, in the midst of the third mineral division, near Jamdaha, on the left bank of the Chandan. I am however induced to consider it as a detached portion of the second class of minerals, from its resemblance to the hill named Katauna. This hill Katauna

is situated a little south from Thanah Mallepoor, in the centre of this mineral division, although it belongs to a detached portion of the judicial district of Ramgar, which is surrounded by Bhagulpoor. There is no Khari on Katauna, nor has it, so far as I saw, any appearance of a crater; but its stone is exactly of the same nature with that on Geruya. Notwithstanding the copious warm springs which it contains, these are the only traces of volcanic fire that I have observed in this mineral division.

The soft matter called Khari, formed of the siliceous rocks hitherto mentioned, leads me to speak of a softer class of stones, which occupies much of this mineral division, although by no means so much as in the first described portion of the district; nor did I here observe any whin; they are all of a softer nature, although many of them are abundantly tough, and difficult to break with a hammer. Commencing a little south from Mungger, and going south almost to the parallel of Kharakpoor, and then turning west to the banks of the Kiyul river, is a long uninterrupted hill. On both sides it is siliceous, and in one place where I crossed it, the siliceous matter is no where interrupted; but in every other place which I had occasion to observe, the centre of the hill seems to consist of a much softer material.

One of the best of these stones, is a very fine grained hornblende in mass, containing small crystals of the same matter, and of a greyish black colour. There is a good quarry of it near Masumgunj, where a few workmen have been long employed in cutting blocks, from whence images of Siva are finished at Mungger, and sent all over Bengal. Very nearly allied to the above at Amjhor-ghat, a very little south from the above-mentioned quarry, I saw large rocks of a fine silky lustre, and consisting of parallel thin layers of different shades of grey, but having nothing schistose in their texture. I found detached blocks of the same at Amrakol, south-west some 10 or 12 miles.

At the same place I found detached masses of a stone, which differs only from the former in its layers being of different shades of red and white. I nowhere saw the solid rock of this stone; but it is probable, that there is such in some place of easy access; as two of the gates at Mungger, have been in a great measure faced with it, and have been orna-

mented with many foliages cut in relievo. It does not take a finer polish than the hornblende, and does not resist the action of the air nearly so well; but from its colours it is more beautiful, and fit for buildings. In this stone had been imbedded many small cubical masses, but they were in such a state of decay, that I can form no conjecture concerning their nature.

By far the greater part of the stones of this class, that I saw, were, however, schistose or slaty, but none of them, at least by the native artists, that I tried, could be split sufficiently thin for roofing slates. Some of them are, perhaps, argillites, but the greater part is of schistose hornblende. The one that is in the thinnest plates, least silky, and freest from crystalisations, and that therefore is the nearest an argillaceous slate, has somewhat of a bluish hue, but in general they are black, or intensely dark grey, with a silky lustre, and sometimes of a fibrous as well as of a slaty texture; and most of them contain small plates, I presume, of hornblende. They take an imperfect polish; and, when rubbed by a pencil of the same substance, leave a grey streak, so that they might serve for keeping accòmpts. In many parts they are wrought by the natives, who form platters of them; or make slabs, with which they lay floors. In general the workmen content themselves with taking fragments, that have been separated from the rocks by the streams of mountain torrents, but in some places they have taken the pains to procure a smooth surface, and split masses from it, as required. In some places adjacent to these proper strata of slate, I observed schistose matter in decay, which appeared to me as a kind of transition between the slate and the adjacent siliceous rocks; for it was more harsh than the proper slate, and in some places showed a tendency to the conchoidal fracture. In some places these slates contain pyrites, but not in great quantity.

Very nearly allied to these schistose rocks are others of a similar colour, and silky lustre; but their structure is not at all slaty, and consists of a number of parallel fibres, strongly conglutinated. These are what I presume some naturalists call unripe asbestos. In some places it is disposed in thin parallel layers alternating with white quartz. It is not applied to use. At Kaha, on the Mon river, I observed a bed of a

black talcose matter, with a silky lustre; and, except where the river had laid it bare, enclosed on every side by siliceous rock. Mica, which serves as a substitute for glass, in its shining appearance is nearly allied to the above; and, as I have mentioned, is very generally diffused through the masses of quartz. In some places I found it abundantly transparent; but the plates were too small for use. Near Ghoramara, however, I learned that there was a place called Abarak, the name which the natives give to this substance; and in passing it, some of my followers found pieces tolerably large, which, with the addition of the name, induces me to think that the substance is procured from thence, although this was denied by the natives. The only stones of this portion of the district that remain to be mentioned, are the calcareous. The detached calcareous nodules called Ghanggat, and mentioned in the former division of minerals, are in this also very common, and need not be again described. The calcareous matter in mass is of two kinds, both very different from that of the first division. One called Leruya, is on the border of the Kamgar district, in the channel of the Ulayi river, and is said to be a small rock; but I did not see the place, nor can I judge of the extent of calcareous matter. It is a white marble, with small crystallisations confusedly heaped together, and intermixed with a little yellowish green mica, so that it must be considered as an aggregate. It takes a polish; but whether large blocks could be procured I do not know. The other calcareous matter in mass is called Asurhar, or Giant's bones. The greatest quantity is found at a place, in the centre of the hills, called Asurni, or the female giant. As the lime, produced from this substance, is whiter and better than that made from the nodules, a great part has been removed. It occupied a space on the surface of the declivity of a hill; about 40 or 50 yards in length; and from the bottom of the hill extended upwards from 10 to 40 yards, and seems to have formed a crust from 2 to 3 feet thick, covered by a thin soil filled with loose masses of stone. It has evidently been fluid, or, at least, gradually deposited from water, as it has involved many fragments of stone, some earthy matter, and a few univalve shells, of a species with which I am not acquainted, and cannot therefore say whether they are a marine

or land production.\* The masses of stone that have been involved, vary from the size of the head to that of a walnut, and the Asurhar, or calcareous tufa, does not adhere very firmly to them, so that in breaking, the mass being very hard, these nodules are generally shaken out. Near the quarry I saw no rock; but all the fragments involved, and those under the calcareous matter are of a dark-coloured siliceous matter. In this place I saw appearances that in some measure justify the native name, for one piece of the Asurhar contained what had very much the appearance of a flat bone, with a process projecting at one end. I also observed a curious impression, a semicylinder about 3 inches in diameter, and 18 inches long, not quite straight, and exposed to view, as if, by breaking the rock, the other half of the cylinder had been removed. The surface of the cavity was wrinkled with transverse folds, like the inside of an intestine; but may have possibly been the bark of a tree, although I have seen no bark with such wrinkles. I rather suppose, that this has been the impression of some marine animal. The greater part of this Asurhar, as I have said, has been burned by Mr. Christian, a Polish merchant of Mungger, who, I am told, owing to the expense of carriage, did not find it advantageous. His overseer gave me a piece of it crystalized, which differs in some respect from any calcareous spar that I have seen. I myself found no crystalized matter in any of the Asurhar. This substance is also found close adjoining to the hot sources of the Angjana river, and by the natives has been wrought to a trifling extent. It is in a stratum about a foot thick, lying on loose siliceous stones, to which it adheres, and is covered by about a foot of soil, mixed with stones. So far as I saw, it contains no animal exuviae. On the stones, through which the hot water issues, both at the sources of the Angjana and at Bhimbandh, there adheres a tophaceous matter, so like this Asurhar, that I at first sight concluded it to be the same; but on trial I found that it does not effervesce with the nitric or muriatic acids, and is probably of a siliceous nature.

I have already mentioned the pyrites found in the slate, and they seem to be martial, but the quantity is very small. Among this class of minerals, the only iron mines of which I

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\* I have since found these shells in the rivers of Gya.

heard are in the ridge, which extends east to Jathaurath; and as they are on the borders of the third division, which abounds in similar mines, I suspect that they in fact belong to this division, and one description may serve for both.

*Minerals of the southern central division of the district.*— This division, as I have said, contains in its centre one detached hill, Geruya, of a nature which seems to belong to the class last described; but as the great predominant features of that division were hornstone, or quartz, and stones approaching to hornblende in their nature, so in the division which I am now about to describe, the grand predominant feature consists of aggregate rocks, composed of felspar, or shorl, intermixed with quartz, and sometimes with mica; nor in the whole, did I see one rock of hornblende, either in mass or schistose, nor any one even approaching to these in nature. This division also abounds in iron mines, and what I have called shorl may, I suspect, in many cases, be rather what is called black micaceous ore, and its separation from the other ingredients of the compound rocks may give rise to the iron mines.

Although these aggregates, containing felspar or shorlaceous matter, are the great component parts of the division, quartz is also very common, not only forming parts of the aggregate, but also forming alternate parallel layers in the same rock, and even whole strata. I nowhere observed any thing like hornstone, or rude jasper, except on the hills, by which the whole civil district is skirted towards Virbhum. I crossed these only in one place, between Dumka and Chandrapur, and therefore cannot speak with precision on the subject. There, however, although the greater part of the rocks were granitic, I found a granular reddish hornstone, exactly resembling many in the second division; and I suspect that a second long chain of hornstone projects from the east side of the rocks of that division, and passes by Baidyanath and Tiur, in Virbhum, to the hill in question.

In the well-defined parts of this third division, the rocks seldom rise into bold broken precipices, although in a great many parts they come to the surface; and in the channels of torrents have generally been laid bare. Their internal structure cannot, however, be so easily traced, as that of the second division, but still it may readily be perceived that it is strati-

fied, for in some places I traced the same species of rock for a great way in one direction, while in the space of a few miles, crossing that direction at right angles, I observed a great number of different kinds, some of which reached a considerable way, while others could be traced in only one place. This implies that the strata are vertical, and that some of them are very wide, while others are narrow. The general direction of the strata seemed to run easterly and westerly.

In some of these strata the component parts were pretty uniformly scattered, thus forming granites and granitels, according as they contained 3 or only 2 ingredients; but in by far the greater number certain plates or flakes, as it were, contained a greater proportion of one ingredient, and certain portions a greater share of the other, forming thus what by some is called Gneiss. The length of these plates is always disposed parallel to the general direction of the stratum, and the edges are vertical, or nearly so. There were also other stones, in which the component matters were disposed in what may be called striæ; that is, a great proportion of one of its component parts run horizontally through the others in lines parallel to each other, and to the direction of the stratum. Such stones have also been included under the name of gneiss.

In many of these stones may be occasionally found vertical layers of white fat quartz, running parallel to the stratum, and entirely separating one part of the aggregated matter from the other, without producing the smallest interruption of substance; nor is the stone more easily broken there than any where else. In these stones, when entire, there is nothing like a schistose, or striated fracture; but in a state of decay, if exposed to the weather in certain situations, especially so that the rain may lodge on the surface, the stone gradually splits into thin plates like slate, and this seems to happen as readily to pure quartz, or to perfect granites and granitels, as to the gneiss. In other cases again, especially where blocks have been detached, the stone decays concentrically, and, of course, losing its angles first, becomes a rounded mass. As none of these stones are applied to use, and are too far removed from the river to be thought of for carriage to a distance, I need not enter into further particulars; I have only to mention, that in Lakardewani, some of them, in a state of

décay, form what is called Makar Mati, and consist of grains of white quartz, mixed with a white powder, which appears to me to be the felspar and mica reduced to one powdery substance. This is washed from the quartz, and makes a white-wash for the walls of the houses, which, were it more generally used, would add much to the appearance of the country. It is most commonly found in iron mines, and its whiteness seems to be owing to the abstraction of the ferruginous particles, when these united in the form of ore.

It must be observed that in the decomposition of these aggregates the quartz is the part which resists destruction by far the longest, although it subdivides by numerous rents in all directions until it is reduced to sand. In many parts of this division the surface is covered with such sand intermixed with fragments of half decayed granite and masses of quartz from veins not yet reduced to sand or gravel, while the felspar has been totally, and the mica has in a great part, been washed away. Proper mica is indeed very indestructible, and broken into small portions remains for ages intermixed with the quartz in sand, but the black shorlaceous matter of this division seems to yield more readily than even the felspar. Here also there are two kinds of calcareous tufa, the Ghanghat and Asurhar. The former is exceedingly common, generally in small nodules scattered on the surface. The Asurhar, so far as I could learn, is found only at one place, the fork at the junction of the Tapsitari with the Kurar, which is near Jamadha. It exactly enough resembles that of the source of the Angjana, and is covered by a little soil; but it is found on a level, and is intermixed with quartz, among nodules of which it has been deposited. Although it has been occasionally wrought, the depth of the stratum has never been ascertained, and the natives allege that the lower down that it has been dug, it has been found to contain less and less heterogeneous matter. I saw no traces of animal exuvæ, but I had an opportunity of seeing so little surface exposed, that it may very likely contain many.

In some lands disputed between Kadar Ali and his former vassal Rupnarayan, and situated near the five hills (Pangch Pahar), I was told that a mine of lead had been discovered, and that this had added much to the bitterness with which the dispute was agitated. The mine was said to have been



discovered by the priest of a village god, a man of very low caste (Mar). He conducted me to the spot and showed me a metallic vein, but I have heard it since alleged that I was intentionally conducted to a wrong place, and that both parties agreed to conceal the real mine; although in my tent even, I could not prevent the agents of the two chiefs from squabbling and worrying each other. This violence may however have been mere affectation, and what I saw certainly was not an object worth dispute, but the pertinacity with which the natives adhere to disputes concerning trifles is very great. I cannot therefore say whether or not I was shown the proper mine, I can only describe what I did see. In the first place it must be remarked that the ore is not that of lead, but the foliated sulphuret of antimony, which the natives call sorma. The priest showed me where he had dug an irregular trench, running from east to west, about 12 feet long, from two to four feet wide, and from one to two feet deep. In this space he said that he had found three ox-loads of the ore in masses from the size of a filbert to that of the fist, and on finding only small bits he had desisted from digging. He said that he found it intermixed with mouldering stone, but whether in a continued vein or in scattered fragments I could not understand. The ore he considered as lead, and had sold it as such to a merchant, who would no doubt sell it to the great, who stain their eyes with this substance powdered. The Gangue, or stone, in which the metal is found, is an aggregate rock of a palish green, or in some places of a rusty colour, and small grain. It is in general in such a state of decay that I cannot venture to guess at the nature of its component parts. In some places it coheres little more than sand, in others it is a soft stone. In almost every part of the gangue small detached bits of the ore may be found, and on digging and clearing away a part I found a vein about one-fourth of an inch thick, inclining from north to south at about an angle with the horizon of  $50^{\circ}$ , and apparently running east and west. The extent of the gangue I cannot state, as it appears on the surface at the place only where it has been dug. About 15 yards from the place, towards the south-east, is a rock of a very fine grained aggregate with a white opaque ground, and some greenish micaceous matter, probably a composition of felspar in decay with chlorite. In a torrent east

from the mine, and perhaps 30 feet perpendicular below the surface, are two decaying rocks, one a fine grained whitish granite with black shorlaceous specks, and I believe some small garnets ; the other consists entirely of black shorlaceous masses united together, and of a foliated texture. The five hills are immense naked masses of granite, and may be considered as belonging to the mineral division next to be described, which extends obliquely to the south, as it advances east from Jathaurath. Without digging at some expense, there is no saying how the mine might turn out, but there is nothing in its appearance to promise its being rich. A vein on the surface, thus suddenly diminishing, is, I believe, considered as a bad sign. Nor is a mine of antimony of any considerable value.

In many parts of this mineral division iron ore is found, but generally in such small masses that it would not answer for European manufacture, and the whole usually procured in a year would not perhaps fill much more than one of the Carron furnaces. Although the mining, or rather the gathering of the ore, is always conducted by the same persons, who smelt it and procure the charcoal, I shall defer giving an account of the processes until I treat of the arts, and shall here confine myself to an account of the mines. Adjacent to the branch of the second division, which strikes east to Jathaurath, are several mines, at Kuji, Osla or Majra, at Belhar, Beldiha, Mongrar, Asnahatari and Rangga, where in all there may be 70 families that smelt iron. I had only an opportunity of examining the first mentioned place, but was told that the others were exactly similar. The smelters of Kuji winnow the sand brought down by torrents from the hills called Bara and Bharam, and during the winnowing very dexterously throw out the light siliceous matter, while the ore remains behind in small grains. On breaking these they appear of a black foliated texture, and are attracted by the magnet. The black iron ore in form of sand is found very common in some other parts of this mineral division of the district, especially after rain in the torrents of Lakardewani, but although it approaches very near the above ore, and only differs in its grains being rather smaller, it is in general neglected, yet these small grains found on the surface are generally admitted to make the best iron. The pebbles found intermixed with

the ore at Kuji are mostly quartz, but I found some which consisted of quartz aggregated with the black shorlaceous foliated matter, which I suppose is the common source of the iron ore of these parts.

A little way south from Kuji is Paharidihi, from whence iron mines extend all the way to Chandan village along the west side of the Chandan river. In this space there are at least 150 families of smelters. At Pahari-dihi the people collect the ore from torrents, just like those of Kuji, but it is found in grains as large as barley. After separating the quartzose matter by winnowing, these grains are broken between two stones and again winnowed. They consist of the same black foliated ore as that found at Kuji, and are attracted by the magnet. At Sejuya, seven miles from Jamdaha, the ore consists of similar small grains, but it is found mixed with earth and pebbles, in veins running three or four feet under the surface. The people dig shafts about a cubit in diameter until they reach the vein, which is from one to two feet thick, and they cut out the whole as far as they can reach, or venture to go from the little shaft. They then make another, and thus proceed over the field. The substance taken from the vein is then dried and winnowed, and then beaten and re-winnowed, as at Paharidihi. A little south from Bhungri Simar I found the mine used by the smelters of that place, which is in the same line, and it differed in nothing from the mine last described, except that the metallic grains, instead of being mixed with clay, were contained in a white quartzose sand. Such is the nature of the mines on the west side of the Chandan river.

In the division of Lakardewani, on both sides of the river, are many mines; but it was said that there are only about 100 houses of smelters. Those of Nuni say that they discover the ore by observing some of it on the surface, and then follow the vein by digging little shafts, as I have before described. The veins are nearly horizontal, generally covered by three or four feet of soil and clay, and the sides are of the same; but under the vein are usually fragments of quartz, thickly imbedded in clay. These veins or beds are never known to extend more than a bigah (45 yards) in length, and seldom reach so far; they are from 1 to  $1\frac{1}{2}$  cubit in diameter, do not run in a straight line, and often send off lateral

branches. The veins are never found on hills, nor near solid rocks. The Makar Mati, or decayed aggregate rock, is often found in the vein, but always in small nests, seldom containing above two or three *mans*. The whole vein is not ore, this is found in masses, intermixed with clay, and sometimes with fragments of quartz. The mixed matter is taken out and dried, and then the earthy matter is separated by winnowing. The ore is then beaten small, and winnowed again, when it is fit for the furnace. The workmen are frequently interrupted by water, and have not attempted any means for draining their mines. The ore is reckoned of two kinds, Asul or principal, and Dusra or secondary. It is supposed that three parts of the latter give only as much iron, as two parts of the former; but it has never entered into the imagination of the workmen to ascertain the proportion, either by weight or measure. I examined a mine of the Asul ore belonging to the smelters of Pokhariya, about four coss north-west from Nuni. The ore is in irregular smooth concretions, from the size of a nut to that of a small biscuit, and is intermixed with clay and quartz, so as to form a hard substance that requires to be cut with a large chisel. The internal substance of the concretion consists of shining foliated black masses, much like that of the ores which I have hitherto described. It is attracted by the magnet.

About five miles west and southerly from Nuni I examined mines of the Dusra ore, belonging to the smelters of Chanda Bathan, in the Mauza of Pandoriya. The one consisted of grains like barley, mixed with clay, and internally of a very fine earthy fracture, and pale reddish brown colour. Their specific gravity is small; but the particles are slightly attracted by the magnet. At Gamra, south from Dumka, about six miles, I examined another mine of iron, which differed somewhat from the above. The ore was found in horizontal strata, not above a foot thick, and covered only by from 12 to 18 inches of a red clay soil. The miners said that they never had gone deeper, having in many places found abundance of the ore. This ore is in small masses, like those at Pokhariya, but its structure is like that of the Dusra one of Chanda Bathan. It is not however attracted by the magnet. These masses also, before they are put into the furnace, require to be broken and winnowed.

At Dumka I visited a mine of a very different description, and which might perhaps give a supply to a forge of some considerable dimensions; but it is not much valued by the natives, and has last year been deserted. For the space of about 40 feet square the people have made small excavations, and have taken out the ore to the depth of about a cubit. So far it consists of angular masses, from the size of the fist to that of the head, and compacted together; but the fissures are filled with earth, which renders the ore easily wrought. Below this depth the mine becomes more compact, and the natives neglect it, as too troublesome; nor has its thickness been ascertained. Neither has its horizontal extent been determined. Ore has been taken from the side of a tank, about 100 yards distant, and it is probable that the stratum extends at least so far. This ore has every appearance of a slag that has been in fusion, and is not attracted by the magnet. I saw nothing near it of a volcanic appearance; but it is at no great distance from the hills of the eastern mineral division, among which there seem to me to be many traces of volcanic fire. The reason of its having been deserted, seems to have been its hardness, and the size of the lumps, which, before they are put in the furnace, require to be broken to small grains, and to be winnowed. In this mineral division also, the enamel mentioned in my account of the first division, as investing pebbles lying on the surface, may in many places be observed.

*Minerals of the northern intermediate division.*—The proper minerals of this division, like those of the last, consist of aggregate stones; but they rise in broken peaks, exceedingly rugged; nor can any of them be traced as extending to a distance in a peculiar line; each rock or cluster of rocks is, as it were, insulated, and it would appear, that merely the summits of the rocks come to sight, and that their roots sink very abruptly, as the rocks are in general at very considerable distances from each other, and between them is found a level country, consisting of soil, in which no fragments of broken rock are to be found, unless we consider clay and sand to be such. The most remarkable of these clusters are the three rocks in the river at Kahalgang, three small hills there on the continent, the hill of Bhader, the peaks of Barkop, a rock between Kahalgang and Bhagul-

poor, the two rocks at Sultangunj, Dholpahari, north from Kharakpoor, Chauthiya, south-east from Tarapoor, Ranganath, Ungchanath, and Gauripahar, all south from the same, Mandar, west from Bangka, and Pangchpahar, south-west from thence. The two hills, named Kharai, south-west from Bhagulpoor, and Khajuri, south-east from Tarapoor, are of a different nature, and seem to me scattered portions of the second division. The aggregates of the fourth division, as well as of the third, are both granites and gneisses, and some of both are very well fitted for building; but in this climate both have a great disadvantage; when exposed to the air, they soon are covered with a black mould, that renders them very ugly. Fine blocks of grey granite, with a pale reddish cast, might be procured close to the water's edge from the rocks of Sultangunj and Kahalgang; and the rock of Dholpahari is a beautiful fine-grained gneiss, very fit for building, and at no great distance from water carriage. In this part of the district also, calcareous detached nodules are common, and on the little hills, which overhang the river immediately below Bhagulpoor, are burned for making lime. I no where saw the calcareous tufa in mass, nor are there any mines or pebbles encrusted with brownish enamel.

The most curious mineral phenomenon in this part is found in certain places which are covered with carbonate of soda, called by the natives Kurwa Mati, and collected occasionally by the washermen of the vicinity, and used by them to clear linen. It is said to be found a little south from Bhagulpoor, and I examined the places between Patharghat and Paingti, where it is also found. These last places are on the skirts of the first division, and might be considered as belonging to it; but the same substance found south from Bhagulpoor connects the production with the fourth division. The most remarkable place is in Mauza Habipoor, said to be about five coss west from Paingti. It is on the edge of the plain, inundated by the Ganges, but adjacent to the high land, and extends about 50 yards in one direction by 30 in the other. Between it and a creek, which joins the Ganges, are some fields higher rather than the saline space; but at least three or four days every year the floods rise over both, cover the saline space from knee to waste deep, and of course sweep away every saline particle. In the month of October, how-

ever, the saline matter begins to effloresce on the surface, which is covered with short grass. The washermen scrape the surface, and beat the saline matter from among the roots, and throughout the whole dry season this may be occasionally repeated; but in the rainy season, even when the space is not covered with water, no saline matter is procurable. The most singular thing is, that near the middle of the field in January I found a small well, which appeared to have been lately dug. It was not more than three feet deep, and contained about one foot of clear sweet water. I was assured by the neighbours, that similar water may be procured in every part of the saline space, and that every dry season those, who labour the adjacent fields, dig a well, such as I have mentioned, which gives them a supply of water, but is filled by the next inundation. The saline matter is therefore constantly forming; but it is only in dry weather that it can accumulate, and it is found entirely at the surface. I shall not, however, until farther investigation, take upon myself to say whether the component parts come entirely from the atmosphere, or whether the metallic basis of the soda rises in vapours from the earth, passes through the water as an insoluble substance, and on reaching the surface, instantly unites with the part of the air, usually called oxygen, and thus forms the soda.

**SPRINGS AND WELLS.**—In the hilly parts there are many springs, but few are very considerable, and the number is not sufficient to give the inhabitants a copious supply of water; and as they have not there attempted to dig wells, they are very indifferently supplied, and are often under the necessity of going far in search of this most valuable necessary of life. In the plains, at a distance from the river, abundance of water is found in wells, and in general at a very little depth, and of a good quality; although at Ratangunj the well water is hard and ill-tasted. Near the Ganges, in most parts the wells are deep, and their water is often hard and very indifferent, especially if found in red sand or clay. At Gopalpoor, near Suryagarha, about seven years ago, a tank was dug 45 cubits deep, and no water having been found, a well was sunk four or five cubits farther. A stake was then driven two cubits into the ground when the water gushed out, and in about three hours filled the tank. It was expected that the water

of this tank would have been uncommonly good ; but the spring seems to have failed, as in the dry season the tank does not contain above 8 or 10 cubits of water, and that as usual exceedingly dirty.

In this part I shall chiefly confine myself to an account of the hot springs, which in fact are numerous, but are confined to eight places, of which the five first are contained in the second mineral division, the next two are contained in the third division ; and the spring mentioned last belongs to the first mineral division, which perhaps shows, that the strata of minerals found on the surface extend a very little way only into the bosom of the earth.

The first hot spring that I shall mention is Sitakunda, the fables concerning which have been already detailed in my account of the topography of division Mungger. It is situated on a plain near the Ganges, about four or five miles from Mungger ; but all through the plain at little distances, are scattered small rocky hills of quartz or siliceous hornstone, and the stones from among which the hot water issues, are of the same nature ; but, so far as I can judge, are all detached pieces. A cistern of brick has been built to include the springs, and forms a pool about 18 feet square, so that one cannot judge so well of their nature, as in the places that will be afterwards mentioned ; but it would not appear that any one spring in this division differs from the others by any material circumstance, only that Sitakunda is at a little distance from any hill, and all the others issue from the bottom of rocks. At different places many air bubbles rise from the bottom, and generally many issue at one time, with irregular intervals before the next explosions. Near where these issue, the water is always rather hottest. I visited this spring first on the 7th of April, a little after sunrise. The thermometer in the open air stood at 68° Fahr., and in the hottest part of the reservoir, where many air bubbles rose it stood at 130°. The priests said, that about eight days before it had become cooler, and that the heat would gradually diminish until the commencement of the rainy season. I visited the spring again on the 20th of April at sunset, the wind having been all day hot and parching ; the thermometer in the air stood at 84° ; in the well it rose to 122°. On the 28th of April I visited it again a little after sunset, the wind blow-



ing strong from the east, but not parching. The thermometer in the air was at  $90^{\circ}$ ; in the well it only rose to  $92^{\circ}$ . The water still continued clear; but soon after, owing to the reduction of the heat, and the natives being of consequence able to bathe in the well, the water became so dirty as to be no longer drinkable by an European. Indisposition for some time prevented me from being able to revisit the place; but in the beginning of July, on the commencement of the rainy season, the water in consequence of a return of heat, became again limpid; and on the 21st of that month, a native sent with the thermometer, found at sunset that it stood in the air at  $90^{\circ}$  and in the water at  $132^{\circ}$ . In the evening of the 21st of September, the thermometer stood in the air at  $88^{\circ}$ , in the cistern at  $138^{\circ}$ , and the number of air bubbles had very evidently increased. The priests, in order to magnify the wonder of the hot spring, have made several cisterns round it, and these at all seasons contain cold water, but exceedingly dirty; nor could I perceive any appearance of their containing springs; the water which they contain, seems to be the rain preserved from evaporation.

I saw no appearance of earthy depositions from the waters of Sitakunda; but it is very likely that there may be such on the stones in the bottom, as such depositions are seen at more considerable hot springs of the district. It is indeed usually supposed, that Sitakunda is pure water; but on evaporating about  $4\frac{1}{4}$  quarts to about  $\frac{1}{4}$  pint in a clean iron vessel, I procured about half a dram of earth. This effervesced with nitric acid, which however dissolved only a part; the residuum of the water after evaporation was tasteless; nor did it show the smallest cloud on the addition of a nitrate of silver. The water is however clear, and the heat prevents it from being polluted by the natives, or other animals.

About five or six miles south from Sitakunda, at the western foot of the ridge running south from Mungger, and at a place called Bhurka, is the second hot spring, which arises from three sources that unite in one pool, perfectly in a state of nature, and form a stream nearly of the same size with that of Sitakunda. Two of these come from under a rock of red and grey rude jasper, and are not accompanied by air bubbles; the third rises at a little distance from some spouty ground which occupies a considerable space, from different parts of

which the water ouzes accompanied by air bubbles, which do not issue regularly, but by a kind of explosions, repeated at short intervals. On the 9th of April in the morning, the thermometer, in all the three sources rose to  $112^{\circ}$ . In this spring also I observed no stony deposition from the water.

The third hot spring is at Rishikunda, about a mile south from the last, and at the foot of the same hill. This spring has been made a place of worship, and a reservoir has been built to collect the water into one pool. This is about 140 feet square, but is rather ruinous, and the springs are unable to heat so large a body of water, so as to prevent vegetation or bathing. The pool, therefore, especially on the side most remote from the sources, is overgrown with aquatic plants and bushes, filled with vermin. The bottom of the pool is in some places sandy, in others rocky, and the water seems to issue all along the western side, from different crevices in the rock. The air bubbles rise from the whole extent of the pool near the hill, and come mostly from the bottom, for a space perhaps 30 feet wide, and 140 feet long; and had the pool been confined to this extent, its heat would have kept it clean. Where the air bubbles issue from among sand, they form a small cavity like a crater. In the centre is a small rising with sundry perforations, through which the air always rises in small bubbles; but every now and then a kind of explosion takes place, an accumulation of air bursts the small rising of the centre; forces its sand to the surface of the water and when it subsides, adds to the size of the little circular mound by which the crater, is surrounded. When I reached the pool, in the morning of the 8th of April, the thermometer in the air stood at  $72^{\circ}$ . In the water, where it issued from the crevice of a rock, it rose to  $110^{\circ}$ ; and in one of the craters to  $114^{\circ}$ . In this spring also I observed no deposition from the water. The stream appears to be rather more considerable than at Sitakunda.

About 15 or 16 miles south from Rishikunda are the hot springs of Bhimbandh, by far the finest in the district. They issue from the bottom of a small detached hill, on its east side and at a little distance from the Mon river, which receives their water, and which rises from another detached hill, a little way farther south. The hill from which the hot springs

issue, is situated east from the great irregular central mass of the Mungger hills, and is named Mahadeva. It consists, so far as can be seen, of quartz or siliceous hornstone. The hot water issues from four different places, at some distance from each other; and at each place, it springs from many crevices of the rock, and from between various loose stones, with which the ground is covered. Each of these four sources is by far more considerable than Sitakunda, and many air bubbles accompany the water, which is limpid and tasteless; but evidently contains earthy matter, as the stones, from whence the very hottest parts issue, are encrusted with a tufaceous deposition, which very much resembles the calcareous tufa; but does not effervesce with the nitric acid, unless the separation of a few globules of air, on its first immersion can be considered as such. These globules, however, appeared to be merely air contained in the little pores of the deposition which remains unaltered in the acid, and is probably siliceous. I have no doubt, however, that the water of Bhimbandh, as well as that of Sitakunda; contains also calcareous earth; but this, being more soluble than the siliceous, is not so soon deposited. The stones, from among which the water issues, are warm; but not near so much as the water, nor so as to be disagreeable to the touch. The thermometer on the morning of the 21st of March, in most of the sources stood at  $144^{\circ}$ ; but, when immersed in places, where many air bubbles issued, it rose to  $150^{\circ}$ .

The water of the Mon river, near the springs, is somewhat hotter than the atmosphere. In the latter, about eight o'clock in the morning of the above mentioned day, it stood at  $76^{\circ}$ ; in the river it rose to  $82^{\circ}$ . In one place of the stream I observed some air bubbles rising, and there, although the stream is pretty considerable, the thermometer rose to  $98^{\circ}$ .

The 5th hot spring is at Malinpahar, about seven miles east and north from Bhimbandh, and this spring is the source of the Angjana river. It is not so large as the Bhimbandh, but exceeds much any of the other hot springs. It issues from the bottom of Malinpahar, a part of the central cluster of the Mungger hills, where a space of about 20 yards in length, and 20 feet in width is covered with fragments of rock, and the water may be heard running under these, and in some places seen through the crevices, until it comes to the lower side, and

unites into little streams, that soon join. The stone, from among which the water issues, is a kind of jasper of a horny colour stained with red. On the 22nd of March, at sunrise, the thermometer in the air being at  $62^{\circ}$ , on being placed on the stones rose to  $80^{\circ}$ , on being immersed in the water flowing among the stones it rose to  $146^{\circ}$ , and on being placed in a crevice of the rock, from whence the water issued accompanied by air bubbles, it rose to  $150^{\circ}$ , which at all the springs is probably the maximum of heat, and the others probably as well as Sitakunda suffer a diminution of temperature, when the season advances. On the stones, where the water issues, I here also observed a small quantity of earthy deposition. About 20 yards east from the hot springs is a bed of calcareous tufa, that has been already mentioned. In pulling out a stone that had been surrounded by this concretion, I found it warm, although perfectly dry, and the thermometer on being placed in the cavity, rose to  $90^{\circ}$ .

Of the two hot springs, that are contained in the 3rd mineral division of the district, I visited only one, which is called Tapnai. This, in the dialect of the vicinity, is said to imply merely heat; although Tap in the more polished dialects is now generally confined to the heat of fever. The spring is situated in Palasi Mawza, about a mile east from Lakardewani, just beyond a fine little river called the Gurguri. The water rises from a field sloping gently towards the river, and, commences cold from some spouty ground, and, having passed through this for a little way, reaches a rock of gneiss in a state of decay. At the side of this rock, the spouty ground is about 10 feet wide, and the water and sand are hot, while at irregular intervals air bubbles issue from the latter, not very numerous, but pretty large. When most of these issued, in the dusk of the evening of the 28th of November, the thermometer, which in the air stood at  $72^{\circ}$ , rose to  $148^{\circ}$ . The stream, formed by the oozing from this spouty ground, appeared to be somewhat less considerable than that of Sitakunda.

The other hot spring of this division is said to be in Mauza Nunbil, SE. from Nuni about 15 coss, on the south side of the Kendu rivulet, at Kendughat, and near the village called Sapchala. The hot spring belonging to the 1st mineral division I did not visit, as I did not hear of it, until I had

passed to a great distance from the vicinity of where it is. The spring is called Unahi, and is said to be situated in the lands of a village called Pukhariya, which for many years has been deserted, and is situated about four coss N.W. from Beliya Narayanpoor, a great iron manufactory in Virbhum. The water of the spring is said to be very bad, which would seem to imply, that it may have strong mineral impregnations, but the natives detest the limpid and tasteless water of Bhim-bandh and Malinpahar, and prefer the water of a muddy tank.

From all the circumstances attending these springs, I think it probable, that the heat is first communicated to some gaseous fluid, and this rising, until it meets the water of a spring, heats it, and issues in part along with it. The original cause of the heat may, therefore, be seated very deep in the earth ; in the superficial strata there are certainly no materials to the mutual action of which it can be attributed.

## CHAPTER V.

## AGRICULTURE, IMPLEMENTS, IRRIGATION, CATTLE, ETC.

In the statistical table, (see appendix) I have supposed, that there are in this district 2974 square miles actually occupied for cultivation, houses, gardens and plantations, besides 145 square miles belonging to the tribes of mountaineers, and cultivated with the hoe. In my account of the topography I have however had occasion to mention, that for the last two or three years, on account of a deficiency of rain, a very great proportion of the rice land has not been sown, and this will reduce the extent cultivated for these years to 2722. Such occurrences, however, being very rare, in the general tables of occupation and produce I have taken the extent and amount on the average of years, when the whole has been cultivated; and in order to form an estimate for such unfavourable seasons, we may deduct from the quantity of rice stated in the tables the produce of 252 square miles, or 483,840 bigahs.

**ARTICLES CULTIVATED.**—The proportion of land, that gives two complete crops in one year, seems to be smaller here than in Puraniya; but the custom of mixing several things, as one crop, on the same field is more prevalent than in any place, that I have yet seen; and there are a greater variety of articles cultivated. A considerable quantity of seed is sown, without previous cultivation, in both the manners mentioned in my account of Puraniya, and in this district the practice seems to have been extended farther, not only in proportion to the quantity of land, but to the number of articles sown. This seems to arise from a greater degree of indolence; but I no where heard of there being fields so far neglected as to produce spontaneous crops of rice.

**PLANTS CULTIVATED FOR GRAIN.**—Rice, although of less importance, than in the districts hitherto surveyed, is by far the greatest crop. It is of six kinds, which differ in season of reaping.

At Rajmahal the merchant gives 60 sers of rough rice, and receives  $37\frac{1}{2}$  of clean. According to my estimate the cleaner has on this rather more than  $16\frac{1}{2}$  (16.6) per cent. of the grain. Three women there clean 60 sers (92 s. w.) a day, so that each for a whole days work gets almost 6 lb. (5.9) of clean rice. Very little of the rice is prepared into Chura Lawa or Murhi, and the poor for breakfast use chiefly meal, either parched or without having undergone that operation, and made either into cakes (Roti), or into a kind of pudding (Chhattu). Rice is seldom made into meal. Wheat, next to rice, is the culmiferous plant cultivated in the most considerable quantity. It is used in the same manner as in Puraniya. At Rajmahal and Mungger abundance of Mayda or fine flour may be procured; and there are bakers who make bread both after the European and Hindustani fashion. At the capital also there are bakers; but the Mayda must be brought from other places. Wheat is sometimes sown without any previous culture, and near the Ganges, on some overflowed land, requires only one or two ploughings; but in higher parts it requires seven or eight. In the interior again, on the low land near the torrents, the fields of wheat are watered once or twice a month; and sometimes the field is watered immediately before it is sown. In most places towards the western side of the district, on both sides of the river, the wheat is sown in drills, which are about a span's distance from each other. Barley is very little sown without previous culture, and some after one or two ploughings. Like wheat, where the land is stiff, it is usually sown in drills. A great deal is sown mixed with the field pea; both are reaped together, and the grains are used intermixed, and called Jaokerao. In the western parts of the district this is one of the common foods of the poor. Maize is most suited for the higher lands of this district wherever the soil is good, and in time will no doubt supersede most of the others, especially rice, which at present is too much cultivated, and ought to be confined to favourable spots. The maize is used both in cakes (Roti) and puddings (Chhattu), and the people have entirely lost the prejudice of considering it unwholesome.

The next culmiferous crop is Maruya, or the *Eleusine* of Gærtner, which by the northern tribe of mountaineers is called Kodom. On the plains it is reckoned only of one kind; but

on the hills of the northern tribe of mountaineers it is divided into two kinds, one of which is gathered in Aghan (middle of November to middle of December), the other is gathered in Bhadong, or three months earlier. My authority for supposing that the Kodom of the mountaineers is the Eleusine, is their saying, that it is the same with the Maruya of the plains; but such a difference in the time of ripening leads me to suppose that the Kodom, which ripens about the end of November, is not of the same species with the other, and may perhaps be the Gundli to be afterwards mentioned, which ripens at that season. The Kheri mentioned under Puraniya is in this district the next most considerable of the culmiferous crops. It is a very poor grain, and can only be used boiled like rice; its meal is very bad, and the straw is bad fodder.

The poor millet called Kodo, next to the Kheri,\* is the most considerable of the culmiferous crops; and much is sown on the low lands near the Ganges. It is a species of *Paspalum*, and perhaps may be the species which in the *Encyclopédie Methodique* is named *coromandellianum*, although in some points it differs from the description given in that work. It is used both boiled like rice and parched, ground, and made into a kind of pudding. It does not form cakes. It sometimes occasions vertigo or intoxication, and this quality is confined to some parcels of the grain; all those who eat of such being affected, and the same field will one year produce intoxicating Kodo, and on the next that which is perfectly innocent. This narcotic quality is by the natives attributed to the grain on certain fields, having been infected by a kind of snake called Dhemna, a large poisonous serpent. This opinion is however very improbable, and the intoxicating quality seems more likely to proceed from some spontaneous seed, not readily distinguishable, being intermixed with the Kodo of certain fields. The straw is eaten by cattle.

Great pains are bestowed on the cultivation of China (*Panicum miliaceum*), considering that it is a poor grain; but it thrives here more than any where else that I have yet seen. The fields are divided into little square plots like a garden,

\* The order of succession indicates the degree of cultivation of each article.—[Ed.]



and regularly watered. The produce is said to be very great, and from the seed, which is shaken in reaping, a second crop which comes up without any cultivation or trouble, is called Labhera, and is cut about the end of September. China is chiefly used in what is called Mara. The grain is first boiled a little, the water is then poured off, and the grain is heated in the same pot. It is then thrown in small quantities into a hot earthen vessel, the bottom of which is covered with sand, and is parched, which bursts the husks and makes the grains swell. The husks are then separated by rubbing or beating. This Mara, mixed with sour curdled milk, is much used at marriages, and in many parts of the district is considered an indispensable part of the marriage feast, perhaps from this grain having been the first that was reared in the country.

Janera (*Holcus Sorghum*) is a very inferior grain, and seems to be gradually giving way to the maize. The Bajra (*Holcus spicatus*) is to be found in a few gardens as a kind of curiosity, but in such small quantities that it cannot be included in the tables of produce. The Gundli\* (*Panicum miliare*), is chiefly confined to the southern parts of the district, which in soil resemble Mysore. The smallest of the culmiferous crops is the Kaun or Kangni (*Panicum italicum*), a grain much superior to most of those mentioned. The number of small birds that are most rapacious after its grain is assigned as the reason of its being neglected. It is chiefly reared by the hill tribes, the northern of which call it Petaga.

The leguminous plants are very important, and, as in Pulariya, the most common is the Mash Kulai (*Phaseolus*) which in the Hindi dialect is most usually called Usid, or Makh. There is a variety of it called Aghani Kalai, which differs in its seed, instead of being green, it is brown, and it ripens about a month earlier. The Arahar (*Cytisus Cajan*) grows with uncommon luxuriance. Great quantities of the Khesari (*Lathyrus Sativus*) are reared, especially among rice stubble, as are also two varieties of the *Cicer arietinum*. The common pea (*Pisum*) has white seeds, like the garden pea of Europe (*Pisum sativum*). The Til, or Sesamum, which, in the hilly parts of the district, thrives remarkably on new-cleared land, especially on a red soil, however poor.

\* The Shamay of Mysore.—[Ed.]

The plants yielding oil are numerous. *Ricinus* in the parts near the Ganges is a very considerable crop, and I have nowhere seen it growing with such luxuriance as in the division of Gogri. The oil made is good and clear, and is excellently fitted for the lamp; so that it may be burned in the houses of Europeans, and in glass lamps without disgust: but such is seldom, if ever, employed by the natives. This fine oil has, I believe, been often sold as castor-oil, procured by expression; but Bhagulpoor is famous for sophistication; and after careful inquiry I have reason to think, that this is not an expressed oil, and that the following is the process by which it is extracted. Break the hard inner shell (*integumentum*) of each seed between two stones, pick out the kernels, and beat these in a large mortar, adding a little water to form a tenacious paste. Put  $2\frac{1}{2}$  sers of the paste in an earthen pot, with 4 sers of water, and boil for about three quarters of an hour. Then scum off the oil, which swims on the surface. From the  $2\frac{1}{2}$  sers of seed between 8 and 10 chhataks (1 ser = 16 chhataks) of oil are procured. It is evident, that such a process could not be used in any country where manual labour possessed value.

The rates for harvest vary as in Puraniya; but in general towards the west are not quite so high, and nominally are often so low as the sixteenth bundle, and sometimes as the twentieth; but the bundle which the reaper takes, is much larger than the 15 or 19 which the farmer gets, which perhaps makes the former about equal to  $\frac{1}{3}$  or  $\frac{1}{10}$  and the latter to  $\frac{1}{12}$  of the whole, where the master thrashes. The lara or gleanings is also carried to a greater extent, and I saw some fields cutting, where at least  $\frac{1}{10}$  of the grain was left. This is not however all loss to the master; as in many parts the gleaners give him a share. The reason of this seems to be, that the lands have often been assessed by a certain portion of the neat produce; and this gleanings was a combination between the farmer and gleaner, in order to defraud the landlord. In the eastern part of the district the harvest is reckoned equal to  $\frac{1}{6}$  of the crop; but this is mostly a nominal charge, a great part being reaped by the owners, or by servants hired by the year. The whole grain is here trodden out by oxen. The granaries of unbaked clay (*kuthi*) are in universal use; in some of the eastern parts, however, grain is

kept in a kind of large basket, made of straw, which stands in the house like the granaries of unbaked clay. In most parts of the district, on account of the white ants (*termes*), grain cannot be kept in pits; but in the low inundated lands, where these destructive insects cannot harbour, the pits are used in the dry season.

In the whole course of my survey, I have as yet seen no gardeners so expert as those of Mungger. They are of the Koeri cast, and possess some little stock. Formerly they were employed in cultivating the poppy, and took annually two crops from their land, one poppy, the other maize or maruya; but, the poppy having been prohibited, in its stead are reared wheat, baygan, ricinus, onions, garlic, and other vegetables. Each man has usually 4 or 5 bigahs (110 cubits square), or from about  $7\frac{1}{2}$  (7.562) to  $9\frac{1}{2}$  (9.453) bigahs, Calcutta measure, and he requires two strong cattle, which both plough, and water the land; for in the dry season the whole is watered with a leather bag. A great deal of the labour is performed with the hoe, and his wife and children assist in weeding and gathering the produce. The gardeners pay a rent of from 7 to 9 rupees a bigah, and of course must be very industrious. The crops of wheat are exceedingly heavy, and certain. Of the 5 bigahs, 3 for the first crop will be maize, 1 maruya, and 1 ricinus, mixed with sem. Of the maize land  $1\frac{1}{2}$  bigah give as a second crop, wheat, 1 baygan, and  $\frac{1}{2}$  safflower, mixed with a few amaranths, or other greens. The maruya is succeeded by garlic, or onions, mixed with karela and radishes. The *sem* and *ricinus* occupy the whole year. The crops are every year changed; land yielding wheat and maize one year gives pulse and ricinus, or maruya and onions another. The produce of each bigah, customary measure, cannot be estimated at less than 20 rs. a year. The soil is good, but not better than a very great part of what is now waste; and the wells are very deep, being from 25 to 30 cubits, as is usual near the great river. This shows what might be done. It is true, that in the interior there would be little sale for the vegetables; but a bigah of this size cultivated with grain, and with the same pains, would no doubt produce to the value of 12 or 14 rs.

Ginger is here reared only for the consumption of the country, and is commonly planted in mango groves, shade be-

ing favourable for the growth of most plants of the scitamineous order. The plant here also is hairy. Turmeric is only reared for the consumption of the country, and not in a quantity sufficient for the demand. Capsicum is seldom cultivated in large fields, but small plots are common.

At Mungger are reckoned two kinds of onion, the bhagalpuri and patniya, the former little, and the latter large. Both are cultivated in two manners. One is by sowing the seed, and transplanting the young onions; such are called Dhemra. The other method is by dividing the root into slips, which may be done at all seasons. Such onions are called Saga, or Sachi. Many onions are sent to Calcutta. The same is the case with garlic. Methi, or fenugreek is cultivated not only in gardens, but in separate fields.

Of the Ajoyan, (or Ammi indicum), considerable quantities are sown on the muddy banks of the rivers, as the inundation retires. The Channani of the farmers is the same with the Randhuni of Ronggopoor, and is cultivated in fields; but the druggists sell the sweet fennel by the name of Channani. Dhaniya, or Coriander, and the Saongp, or anise, are common. The Jira is confined to the very borders of Gaya. The seed resembles that of cummin, or perhaps is the same. The most common Baygan, at Munger, is called Golbhanta. It has prickles, and is therefore a kind of the *Solanum Insanum*. It is shaped like a pear, and may usually weigh half a pound. This is the Golta of Puraniya. The Chengga, which has a cylindrical black fruit, and prickles on the leaves, is the Baramasiya of Puraniya. The Baramasiya of this district, has a fruit shaped like a horn, polygamous flowers, and no prickles. It is therefore a *Solanum Melongena*. Its fruit is greenish, or dark red. The species which in European hot-houses is often called the egg-plant, from the resemblance of its fruit to the egg of a common fowl, is pretty common, but has no peculiar name. The European potato (*Solanum*) has come into very general use at Mungger and Bhagulpoor, and at both places considerable fields are raised, and the roots are preserved throughout the year. They are not so large as those of Patna; but some are sent to Calcutta, and to several intermediate places. The cultivation has only for a very few years extended to the natives; and they never are used as the staple article of food; they serve only when fried in oil, salt,

and capsicum, as a seasoning for grain. They are called Gol-Alu. The Shukurkund Alu (*Convolvulus Batatas*) is commonly reared in gardens; but no extensive fields are occupied with this root, which seems to be giving way to the potato most common in Europe. Yams (*Dioscoreas*) are not in great variety.

What at Mungger is called Pekchi, seems to be a smaller variety of the Komorbhog of Ronggopoor. The bulbs are small, many adhering in a cluster to a bunch of stems, and are ripe from August to October. The Aruya of this district which is the most common, seems to be different from that so named at Nathpoor, and is the Muckli of Dinajpoor. Cuttings of the roots are planted about the end of January, and are watered once in four days, until the rains commence. Many shoots spring up close to the parent, and under these many proliferous bulbs are formed, larger than those of the Pekchi, although the plant is much smaller. They are fit for use about the end of September, and weigh from 1 to  $1\frac{1}{2}$  lbs. each. They are dug, when ripe, and kept for about three months. The petioles or leaf stems are seldom used. It is said, that a bigah will give 50 *mans* of root, worth 8 *anas* a *man*, which is at the rate of about  $27\frac{3}{4}$  *mans*, worth  $13\frac{1}{4}$  rupees, from the Bigah, Calcutta weight and measure, or at the rate of 6842 lbs., worth  $39\frac{1}{2}$  rupees an acre. The ground is manured with cow dung and ashes. The Ol (*Tacca sativa*) of Runph, is raised in small quantities, in corners about the houses, as the *mun* is about Calcutta: but so little pains are bestowed on it, that the root always retains a considerable acrimony. It is said to be good only on a black free soil, which in this district is not common. Radishes are not near so common as in Dinajpoor, but in most parts of the district many small plôts are to be found. They are all of the red kind. The carrot is cultivated in fields, is much eaten by the people, and what can be spared is given to cattle. If watered two or three times in the season, the carrot will give 100 *mans* a bigah, Mungger measure and weight, or double the produce of the Arum above stated. The value, by wholesale, is about 8 r. at the rate of 2 r. for 100 heaps, of about 10 sers each: but this land gives another crop in the year, that which is cultivated with the Aruya produces nothing else. Other statements, not likely to be exaggerated, make the produce  $\frac{1}{2}$

more, or 600 heaps a bigah. The carrots are ripe about the end of January, and will keep throughout the spring, when fodder is scarcest. Plantains are very scarce.

In the villages scattered through the woods of Bangka and Lakardewani, two kinds of *Dolichos*, called *Kursa*, are reared about the hedges, and their beans are used as *Tarkari*. The smaller or *Chhota-Kursa* has at least a great resemblance to the *Dolichos pruriens*, and the hair on its fruit produces the most violent itching; but it differs in so many particulars from the *Cacara pruritus* of Rumph (vol. 5, page 393), and the *Nai corana* of Rheede (vol. 8, page 61), that I consider it as a distinct species.

The *Kursa*, although exceedingly like the other, differs in the hair of the fruit, which is soft, and excites no itching. Neither species is worth cultivating, the beans being very indifferent. Rheede attributes invigorating powers to those of his plant, and it is probably some such idle notion that induces the people here to use so wretched a vegetable.

*Plants cultivated as greens.*—The *Amaranthi* are by far the most common. Spinach is not much used, because it will only grow in the dry season. The *Basella* is called *Poyi*, and the *Chenopodiums* are a good deal used. The *Gulpha* is the Purslane, and its leaves are often used as a green, as is also *Fenugreek* in the cold season. Fennel leaves are sometimes used as a green.

*Plants used as an acid seasoning.*—There are still fewer than in *Puraniya*, and mangoes are almost the only thing in request. The leaves of the *Chandana* (*Hibiscus cannabinus*), which is cultivated for making ropes, are occasionally employed. The Europeans have paid some more attention to their gardens than in *Puraniya*; but they are still very backward in their fruits. I have already mentioned most of the fruit trees that have been introduced. Mr. Christian, of Mungger has figs, and several gentlemen have grapes, which are tolerably good; but both the figs and peaches would require shelter from the rain, by giving them a western or southern exposure, from whence rain seldom comes, and by placing them against a wall covered by an arch. The common European vegetables thrive well enough during the dry season; but asparagus has made little way; and it is the only one that grows during the rainy season. Artichokes

are in abundance, and continue all the heats of spring. It seems extraordinary that this plant, which thrives uncommonly in the very cold and moist climate of the highlands of Scotland, should in India prefer the most sultry and arid seasons and places. In Bengal Proper, it can scarcely be brought to produce.

The fruits reared by the natives are very much the same with those of Puraniya, and equally neglected, so that I have no occasion to repeat what has been said on that head. The only additions, that I have to make, are respecting those of the cucurbitaceous kind, which near the Ganges are much cultivated. The water melons (Tarbuj) are very good. The best kind of melon is here called Kharbuj, and seems to me to be the *Cucumis Dudaim* of Willdenow. It is depressed at the poles, and its smell is very fine, but it is insipid, and very poor eating. The Phuti Kangkri or Dam, differs from the plant, so called at Puraniya, in the shape of its fruit, which instead of being oval is cylindrical<sup>1</sup>, and it is often two feet long, by a diameter of from four to six inches. It has an agreeable smell, but is still more insipid than the Kharbuj. The Mithuya Kangkri of Mungger is, I suspect, the *Cucumis flexuosus* of Willdenow; but differs very little from the two above plants, except that its fruit has little or no smell, and in place of being cylindrical, or depressed, tapers to a point. Although its native name would seem to imply its being sweet, the fruit is exceedingly insipid. The common cucumber is very abundant, and tolerably good. Boiled or stewed it is one of the best vegetables that the country produces. Some of those, who make garlands near the towns keep small plots, where they rear flowers for sale.

The only plants cultivated as medicines to any extent are the *Nigella sativa*, and common cress. The former, it must be observed, in the dialect of Maghadha, is called Mangrela, while the name Kalajiri, by which it is known in Puraniya, is in this district given to the *Conyza anthelmintica* of botanists, the Sungraj of Bengal. In the gardens, besides the cress, which is by far the most common, there are raised the following medicinal herbs. *Cissus quadrangularis*, species of Zinziber. One kind, the root has a flavour of the mango. Gahakaran, a scitamineous plant. Israulgad, an *Aristolochia*, which seems to be the *Indica*; but differs in some points

from the accounts given of that plant. Isaddaula, *Euphorbium Tithymaloides*. Sudarsan, perhaps the *Radix toxicaria* of Rumph (VI. tab. 69), a species of *Amaryllis*. Chita, the *Plumbago zeylanica*. Dhanattar, lemon grass, which, I believe, has never been known to flower, and cannot therefore be referred to any botanical system. Barbari, Nazbo, the two kinds of *Ocimum* mentioned in my account of Puraniya.

Plants cultivated for making thread or ropes are of little importance, and exclusive of the lands belonging to the hill tribes, amount to only about 18,000 bigahs, most of which during the year produce also other crops, as will be seen from the tables of produce. The *Crotolaria juncea*, called Son in Bengal, in this district is called Kasmiri, and is reared in small plots by the fishermen for making their nets, and is applied to no other use. The Chandana, Amliya or Kudrum, of this district is the *Hibiscus cannabinus* of botanists, is cultivated nearly in the same quantity as the Corchorus, and the crop generally occupies the ground for a whole year. The natives reckon its ropes stronger and more durable than those of the Corchorus; but they are still harsher, and its fibres cannot be reduced to fine thread.

Cotton in this district is by far the most important of these crops, and the interior is very much fitted for its cultivation, so that at least none needed to be imported; but although 12,000 bigahs are said to be cultivated on the plains, besides a very considerable quantity on the hills belonging to the northern tribe of mountaineers, much is still imported. A few plants of the Kukti, the wool of which has the colour of Nankeen cloth, are scattered thinly through the fields of the Gajar. I have not been able to trace most of these kinds through their stages of growth, so as to ascertain with sufficient accuracy their botanical affinities. The only one indeed, which I have been able to examine, is the Gajar, which differs in nothing essential from the *Gossipium* of Rumph (vol. 4, *pl.* 12), which in Puraniya is called Bhadai; but the season of its growth, and manner of cultivation are totally different. It is sown about the end of June, ripens about the end of April, and is then cut; but for two years springs from the roots, giving a crop annually at the same season. For the manner of cultivation, and value of produce, I must in general refer to the tables.



*Plants cultivated for saccharine juice.*—Besides the palms and the Mahuya tree already mentioned, the only article under this head is the sugar-cane. It is chiefly cultivated near the banks of the mountain rivers, where it can be supplied with water by means of canals, and in the vicinity of Rajmahal, where it grows with more luxuriance than I have any where else observed. In the interior it is not so rich, but still is tolerably good, and is cultivated with some care. The lands there are level and rich, and under constant crop, much as in Ronggopoor and Dinajpore: but in Rajmahal they are swelling, and rather stiff, but the field generally, although not always, is allowed a year's rest between the crops. In the former places the produce usually stated was about  $5\frac{1}{2}$  *mans* a bigah (Calcutta weight and measure) of the extract; but this is ridiculous; for although the natives stated, that the greater part of their cane is of the small kind like a reed (Nargori), I saw none such; and my assistants recollect very little. I do not think, therefore, that less than 10 *mans* of the thinner extract (Rab) can be allowed for the bigah. Very little of the cake extract is made.

There is here a greater variety of kinds than in any of the districts hitherto surveyed. Of the Kajli, Khagri, and Nargori, I have already had occasion to treat. The Kajli is by far the best, and is confined to the vicinity of Rajmahal; but the mango of other places seems to me to be the same, and is chiefly used for eating without preparation, and much is consumed in that manner. The Paungdi and Raungda are tolerably large yellow canes, and one of them at least would appear to be the same with the Bangsa of Puraniya; but both agree with what I was able to notice concerning it. The Keruya is a poor small cane.

Plants used for smoking and chewing are of very little importance. The tobacco is not adequate to supply the demand of the country, although in most places it seems to thrive. It is on the north side of the Ganges alone, that it is cultivated to any extent. That which produces the largest and mildest leaf is called Mandhata or Dhamakul; the smaller and most narcotic is called Desla or Thariya. Betle leaf sells very high.

The hemp reared for intoxication occupies only 13 bigahs that are avowed; but, as I have said in my account of Pura-

niya, a few plants are in many places reared in hidden corners. The people here only allow 2 *mans* a bigah, but not the smallest reliance can be placed on what they say. I neither saw, nor heard of any poppy, although a considerable quantity was formerly reared. Catechu, Ajoyan, Saongp and Dhaniya are also chewed. There are no betle-nut palms.

*Plants used for dying.*—Indigo as usual, is by far the most important.\* Safflower, the Kusum of the natives, is of more importance here than in Puraniya. About 18,000 Jujub trees are used for rearing the lac insect. The mulberry is confined to the eastern part of the district.

*Implements of Agriculture.*—The plough does not differ materially from those of the districts already described; but it is always provided with a little bit of iron. To draw the plough scarcely any cows, but a few buffaloes are employed. The other observations made on this implement and its management, in my account of Puraniya, are entirely applicable to the ploughmen of Bhagulpoor. Wheat and barley are usually sown in drills; and the drill consists of a bamboo, having at its top a wooden cup, into which a man drops the seed. The bamboo is tied to the beam of a plough, and its lower end passes through the body of the plough, just behind the iron, so that the seed falls into the furrow, and is covered by the next.

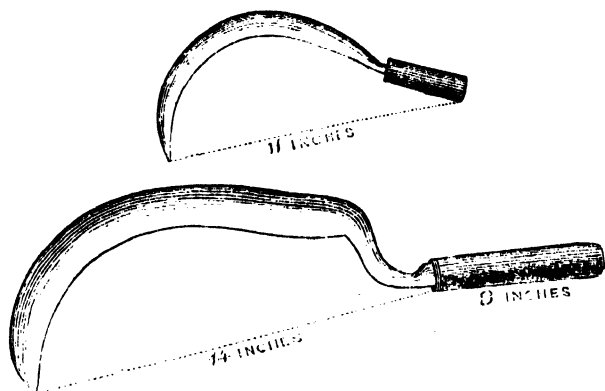
In the eastern parts of the district the Mayi is used; but in the western, as in Puraniya, its place is supplied by the beam or plank called Chauki. In order to save the skin ropes many farmers here use for dragging it an iron chain fastened to a hook, and they have had sufficient ingenuity when it is dragged by ropes made of hide, to use a hook driven into its upper side, and to this to fasten the rope. Many farmers have the Bida or rake drawn by oxen, and it is usually provided with iron teeth, or at least the teeth are alternately of wood and iron; but in many parts this implement is not used, and there is nothing to supply the want of the harrow.

The reaping hook is of two kinds; the Hangsuya, which has no teeth, and is the larger of the two; and the Kachiya, which has teeth, and is very small. The former is most

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\* Dr. B. gives a long account relative to indigo, which at the present day would be superfluous.—[Ed.]

usually employed to cut grass; but in some parts they use for the latter purpose a large sickle called Jhapau, and the Hangsuya (here represented) is used to cut corn.



There is nothing remarkable in the weeding iron (Khurpi), the hatchet (Kurbali), or the bill (Dao.) The hoe (Kodar) is of two kinds, differing chiefly in length of shaft; but not distinguished by appropriate names. On the north side of the river every family has a large wooden pestle and mortar for beating rice, and the lever (Dhengki) is not in use; but on the southern side many families, even for their own consumption, use the latter instrument; and it is universally employed by those who beat for sale.

The sugar mill (Kalu), is of the same kind with the Kol-gachh of Ronggopoor. The iron boiler is however in general larger, and the number of earthen pots through which the juice passes, before it comes into the boiler, where inspissation is completed is much smaller, seldom exceeding five. A set of works clears about five acres of cane in a year, and is usually made at the joint expence of from five to ten neighbours who may rear that quantity, and who unite their cattle and servants to clear the whole crop. The iron boiler is the only part of the apparatus at all valuable, and is often hired by the season.

A small cart called Saggar in the southern forests is in universal use, and is employed to bring home the harvest, to carry goods to market, and to bring fire-wood. It is exactly on the plan of the Mysore cart, described in my account of that country, but more rude, and consists of an axle-tree

with two wheels made of three planks, joined together with wooden bolts and cut round, with a hole in the middle for the axle-tree. The body consists of two sticks tied behind to the axle-tree, and joined together before at the yoke. It is drawn by two cattle. Near the Rajmahal the farmers have a kind of waggon on four wheels, very nearly as rude as the above-mentioned cart; but it is chiefly used to bring firewood from the forests. The use of the small cart, however rude, is a great improvement, and should put to shame the farmers on the banks of the Ganges, who flatter themselves with being more civilized than the people of the forests, and yet continue to carry home their harvest on their heads and shoulders.

*Manures.*—Notwithstanding the abundance of fuel, a great deal of the cow dung is collected for burning; and except in Kalikapoor, on the land called Rarh, I saw no such thing as a dunghill. When in other parts of the district it is wanted to enrich any land, it is done by collecting throughout the night a number of cattle on the field. No great pains are however bestowed on this; for most of the cattle that are kept in Bathans, are not brought at night to the fields that are in the vicinity of the wastes where they feed, and their manure is totally lost. On the whole however, the farmers are rather more attentive to this improvement than those of Puraniya, especially on their sugar land, which is always manured, and the effects are very visible on the crops. Oil cake and fresh earth are given to betle-leaf, and the latter is given to the mulberry. Ashes in many places are neglected, in others they are given to winter crops. In the high rice lands called Rarh, which constitute the cultivated parts of Kalikapoor, the farmers collect cow-dung and ashes for that grain, and also manure it with mud from the bottoms of old tanks; and their condition shows, that they find an ample reward for the little additional labour that they bestow. Manure is usually given to each field once in the two years. Wherever the land is inundated, and has received the mud of the Ganges (Reti), manure is considered as totally superfluous. Much more attention is paid to watering than in any of the districts formerly surveyed. In the marshes of Rajmahal the spring rice is watered by an instrument like a canoe; and on the banks of the Ganges by a basket suspended from four ropes.

The canals from rivers are called *Dhar*, and are made and repaired entirely by the owners of the land, who appoint petty officers to distribute the water. These canals are usually from 1 to 3 coss long, and usually 4 or 5 cubits deep, and as much wide; but a few extend from 3 to 6 coss in length. Their principal use is to supply the rice fields during the rainy season, when there happens to be long intervals of fair weather, and during the month *Kartik*, when the rains have usually ceased. At this time the mountain torrents contain a stream, which is turned into the canal by temporary dams. In the rainy season the rivers are abundantly high to enter the mouths of the canals. The cost of digging these was stated to be  $2\frac{1}{4}$  rs. for every 100 *guz* long, by 1 wide and 1 deep. The *guz* is  $33\frac{1}{2}$  inches, which is at the rate 346 cubical feet of earth moved to a short distance for the rupee. Each farmer makes small dams across the canal in order to force the water upon his fields; and, when these have received their allowance, the dam is broken, and the water is permitted to run to the next man's possession.

The method used at *Mungger* for raising the water for irrigation is by a leathern bag, drawn by two oxen passing down a slope, with a rope passing over a pulley or roller. This instrument is called a *mat*, and differs from the *capily* of *Mysore* in having no contrivance, by means of a leathern tube and double rope, for evacuating the bag, when it reaches the surface. Two men are therefore required for each *mat*; one to manage the oxen, and one who, when the bag reaches the surface, pushes it aside, and, placing it on a cistern, allows the water to run out by slackening the rope. He then, as the cattle ascend the slope, throws the bag into the well. No time is lost in this operation, but an additional hand is required. The common depth of wells at *Mungger* is from 25 to 30 cubits, and some are still deeper, and yet bear the expense. In the interior southern parts, all the wheat and sugar-cane are watered; but the implement used is a pot suspended from one end of a lever. In some parts of the district, in place of suspending the pot to the end of a lever, it is lowered and drawn up by a rope passing over a roller, which turns round between two forks, but is not thicker than the arm, so as to afford very little increase of power.

Throughout the Behar part of the district, asses are pretty generally diffused among the washermen. An ass sells from two to three rupees. The stock of cattle of the cow kind in this district, when compared with Bengal, is of great value. Near the Ganges, on both sides of all the Behar part, the cattle are fully as good as those of the best parts of Puraniya. In the parts belonging to Bengal they are inferior; but are not so small as in Dinajpoor or Ronggopoor. In the forest districts they are of an intermediate quality, and seem to have been rapidly improving; for Captain Browne, in his account of that part, speaks of the cattle as being uncommonly small, which at present is by no means the case. An improvement, indeed, might be naturally expected; as since the abolition of plunder, the best cattle from the banks of the Ganges frequent these forests, and by an intermixture of breeds will no doubt render both of the same value. The cattle kept by the tribes of mountaineers, and fed on the pastures at the roots of their hills, are said to be remarkably strong. They are used for carriage alone. Uncommon little pains are bestowed on the nourishment of the sacred beasts, and they are treated with the utmost severity in exacting their labour, but in other respects great attention is bestowed on them. It is only in Lakardewani that some impure taungtars have been permitted to work the cow, and a most violent opposition was at first made to such an atrocious innovation; but the obstinacy of the barbarians prevailed, chiefly, I believe, because they were thought powerful in witchcraft, and because disputes with such people were considered as dangerous. This tenderness towards the cow no doubt has tended to improve the breed; but has been counteracted by a very great proportion of the labour being performed by bulls, nor did I hear any where of good prices being given for bulls reserved for breeding, the number of which is indeed small, nor is this compensated by many consecrated animals, although these are not only more numerous in proportion than in any of the districts hitherto surveyed, but also more pampered and vigorous. The bulls that are wrought in the plough sell lower than even cows, and these sell a little lower than labouring oxen of the same size. An estimate of the whole quantity of milk that the owners of the cows receive, and of its value, will be found in the Appendix.

**FARMS.**—The high castes do not enjoy the same privileges as in Puraniya. In no part are they more exempted than others from paying rent for the ground occupied by their houses; but in most parts of this district it is from few only that ground rent for houses is demanded, and it is only in some parts, chiefly in the portion of the district which belonged to Bengal, that they are allowed to occupy land at a lower rate than others. A certain part, however, of the military tribes hold land by military tenure, either free of rent, or for a mere trifle, and the lands of both are miserably neglected. But besides these a great deal of the land is rented by the high castes; and a great deal of this is supposed to be at the same rate with what is paid by common cultivators; but their rent is seldom levied with rigour, and the kinsmen of many of these farmers being employed in the management of the estates, various shifts have been invented to lighten their burthen. None of them work with their own hands, and it is not customary in this district, except just in its southern extremity, to relet land to under tenants, neither are those who cultivate for a share numerous, so that most of the land rented by the high castes are cultivated by their slaves or hired servants. The higher rent paid here makes them more industrious and attentive than in Puraniya, and their stock of cattle also is very large.

The next class of tenants consists of the tradesmen and artists. Among these I have only included such of the Goyalas as deal in milk, for in this district a very great number of that caste does not deal in milk more than any other farmers. A great many tradesmen work part of the year in their art, and the remainder at their farm. Here a great part of the petty traders (*Beparis*) are included among the Pangnias (or tradesmen).

The third class of tenants consists of Chasas or ploughmen; but this denomination of persons contains not only the tenantry who are willing to labour with their own hands, but servants, day labourers, and slaves. In Kalikapoor I saw some wealthy men of this class, like the great Muhammedan farmers of Dinajpoor, and these were also of the same faith; but in general this class is very poor. Most of the more wealthy are petty dealers, and are distinguished from the petty dealers of commercial tribes by being called Grihastha-beparis, in

place of Beparis. The fourth class of tenants consists of under tenants, except in the southern parts of Lakardewani. In the appendix will be found an estimate of the proportion of live stock belonging to the high castes, to tradesmen, and to farmers; and an estimate of the proportion of rent paid by the three first classes, and of the proportion of ploughs held by their owners, or men of their families, by those who cultivate for a share, by hired servants or slaves, and by under tenants. This will explain many circumstances relative to the stock of farms, and will enable the intelligent reader to judge in what manner the burthens fall on each class of the tenantry.

The expense of implements is next to nothing, so that the only stock worth notice is plough cattle. In many parts the tenant pays, nominally at least, one half of the produce as a rent; but this is on valuable crops. The expense of cultivation however, even allowing for the frauds, to which the high castes are incident, cannot well exceed upon the whole, one half of the gross produce, as in the former. The cost of harvest is here in general smaller; but on the whole, even where the tenant does no work himself, every charge is, I am certain, defrayed by half of the gross produce; nor can the rent paid to the landlord amount to one half of the remainder.

There are fewer great or wealthy farmers than in Dinajpoor, or at least they conceal their wealth so carefully, that it is unknown, and in fact becomes either useless to themselves or others. Owing, however, to the system of advances having made comparatively less progress, the people are not so much involved in debt and difficulty. In the appendix\* will be seen an estimate of those who pay their rent as it becomes due, from their own stock; of those who borrow ready money; of those who take advances for the purpose, but who at crop season complete their engagements; and of those who, having taken advances, are annually falling more and more in debt. Similar statements have not been formed for the districts hitherto surveyed, but in all of them, I am persuaded, it would have appeared that the first class would have been less numerous,

\* Dr. Buchanan gives tables on all those subjects, similar to those of Behar; (see Note I Appendix) but the totals, or averages, will be sufficient for the formation of a general idea on the subjects referred to. [Ed.]



and the last class more predominant. Money, borrowed in small sums to pay rent, usually pays at the rate of  $\frac{1}{3}\frac{1}{2}$  part per mensem. The arrears of rent due to landlords are a trifle.

There has been no attempt to regulate the size of farms, which are nearly of the same size as in Dinajpoor or Puraniya, but it is not so common a custom here as in the latter district, for poor farmers to unite stock, to enable them to complete what is requisite for a plough: each man, in by far the greater part of the district, has as much of his own, or borrows it.

Scarcely any of the landlords make advances to the tenants, and those who follow this practice, are chiefly confined to the eastern parts of the district, and it is given only to new comers. It would be more useful in the wastes, where poor men alone can be expected to come, and where new settlers are much required. The advances which are made are usually in the form of a loan for one year, at the rate of 2 anas interest on the rupee, or  $12\frac{1}{2}$  per cent. The rents are much more equally assessed than in Puraniya; and in the same vicinity are in general somewhat in proportion to the value of the land, but in different parts vary astonishingly; and on this subject in particular, the utmost pains were taken to keep me in the dark. What I have learned on the subject shall be detailed in my account of particular estates. In general, however, it may be observed, that except in a few places, and on rice land, it is too low to act as a sufficient stimulus to industry; and it will be noted, that it is only the rice lands, and the parts which are high rented, that are in a tolerable state of cultivation.

What I have said in Dinajpoor and Ronggopoor concerning the illegal exactions, alleged to be taken by the Zemindars, or their agents, are entirely applicable to this district; and, although the landlords have not here the excuse of the privileges granted in Puraniya to the higher castes, I am persuaded, that in general the people are worse used than in that district, and to this chiefly must be attributed the miserable condition to which many parts of it are reduced.

The tenants of Behar in general transact their own business with the agents of the Zemindars, and it is only among the rude tribe called Saungtar, and in the Bengalese parts of the district, that a kind of chief tenant is employed to transact the whole affairs of the community, a practice, as I have men-

tioned, that is common in Ronggopoor, and which seems to have been pretty universal in India ; for the chiefs of villages, by whatever name (Mandal, Makaddam, Gauda, Shanaboga, &c.) known, seem to me to have been originally agents for the tenants, and not officers of government, or assistants of the Zemindars, as is now usually the case ; and wherever the native customs have been carefully preserved, and well administered, the appointment of this officer is always regulated by the inclination of the tenantry. In Behar, as I have said, the tenantry have more confidence, and chiefs of villages have in general been disused. The Bengalese are more bashful ; and it is only the Mandal that is gifted with the faculty of speech before a person of such consequence as the village clerk (Patwari) ; nor is it supposed that each Mandal should have audacity enough to find utterance before his landlord ; so that on estates of any size there is a chief Mandal, who is spokesman for the others.

The rents of this district are levied in two manners, Nukudi and Bhauli. The former is a money rent, and is collected by messengers in the same miserable instalments that have been mentioned in my account of Puraniya, and which give rise to all the vexations that are liable to such a mode of collection : but here this rent is free from the evils that in Puraniya have arisen from inequalities of assessment. For although in the part of the district where the revenue is paid to Moorshedabad, the assessment on the high castes is trifling, yet the mode of having created the inequality is quite different, and is productive of much less evil, as will be explained in my account of the estates of that part.

Bhauli, is a rent paid in kind, and is confined to the part of the district which is comprehended in Behar, and is chiefly confined also to rice, with very little on other kinds of grain. It, in fact, is similar to the division of watered crops which takes place in the south of India, and seems to have arisen from the same source, namely, the uncertainty of these crops, which in some dry seasons cannot be at all taken, while in others that are favourable they are exceedingly valuable. In the former the tenant could not pay a money rent, and in the latter, it is fair that the landlord should participate. Various deductions before division are made from the heap, especially the whole expense of harvest ; and, after these deductions,

the landlord in some places receives one-half, in others  $\frac{2}{3}$ ; but then the landlord, as I have said, is at all the expense of the canals, and generally at all that of the reservoirs for irrigation, and the harvest, one of the heaviest deductions is in favour of the tenant. In my account of Mysore, however, I have taken occasion to show that this practice is a great encourager of sloth; and as a means for collecting the revenue of the state is liable to the most gross abuse. Even here, where the Zemindars might be supposed capable of attending to the division, the collusions of their agents and the tenants, I have little doubt, produce numerous frauds, and have given rise to the following mode of avoiding the actual divisions. It has been customary for the Zemindars to send persons to value the crops, and to make an agreement with the tenants for a sum of money in place of his share. The tenants, so long as the estates continued in the management of the Zemindars, were abundantly satisfied with this plan; but some persons, who have farmed the rents of certain estates, have of late given occasion to heavy complaints; and the tenants allege that they are not at all consulted in the valuation, and are compelled to pay much more than the real price of the Zemindars share. Tenants who hold lands by Bhauli are in fact no better than the Adhiyars of Puraniya and Dinajpoor, only that no man's whole rent is paid in that manner. It is evident, however, that the landlords, on the whole, must have been defrauded, as many of these tenants live as easily as those of districts, where the rent does not amount to more than one quarter of the gross produce, and is often much less; and many of them here are of high castes, and abundantly indolent and careless.

The tenures, by which farmers in this district hold their land, are extremely various. I shall here only mention a few circumstances of a more general nature. With regard to the duration of the leases, some part is in perpetuity. Some of these are held by persons of high rank, and considerable possessions, being called Rajas and Tikayits, and according to the regulations these ought to have had their lands separated from the Zemindaries, to which they belonged, when the under Zemindars, at the perpetual settlement, were freed from vassalage; but being then totally ignorant of the law and customs of Europeans, they were persuaded to avoid

applying for this relief until the time allowed had elapsed. This they now bitterly repent. Some of them, having had their leases confirmed by the European officers of revenue, refuse to submit to any renewal, and their lords are earnestly soliciting them to accept of new leases on any terms, in order to set up a claim of the investitures being only for life. Others, who have quietly submitted to this rule, now find that they are harassed by claims on account of the renewal. In the wilder part of the district these various claims have produced the most violent dissensions and heart burnings, and nothing but the fear of a superior military force has prevented the parties from having had recourse to arms. These tenants, as I have said, are often men of considerable rank, but by the Zemindars are called Ghatwals, or guards of passes. Some of them still are bound to attend their lord, or to assist the officers of police, with a certain number of armed men; while others are bound only to pay a certain sum of money. It is most notorious that the lands of these latter are comparatively thriving, and that progress is daily making in bringing more into cultivation, and in introducing comfort and the arts; while the lands held by the military tenure are going backwards; nor in the present state of affairs do these military services seem to be at all required; while, if any military force was requisite, this would be totally ineffectual. In these military tenures another cause of dispute has arisen; the landlords pretend that a certain extent has been assigned to each Ghatwal, or tenant, according to the number of men, that he is held to maintain, and that on condition of the military service the tenant is entitled to hold this for two anas a customary bigah, or less than one ana for one of the Calcutta measure; but if any more land is cultivated in the villages occupied by the military tenants, it is liable to full rent. The tenants deny this, and allege that the whole villages, which they occupy, were assigned to them for the support of their men, and the payment of a fixed sum in money, and that they may cultivate as much or as little of the land as they please.

Formerly the custom of not fixing the rent until the crop had been sown was common, but fortunately it has now in a great measure gone into disuse. It must be observed that, except in the leases in perpetuity, few or no tenants, espe-

cially in Behar, have any proper document either for the extent of their possession or the amount of the Zemindars claims. The leases, as they are called, are granted to two or three chief men of the village by name, with an &c. comprehending all the others; and they do not specify even the total of the lands, nor the total amount of the rent, but merely the rate of rent; and sometimes not even that, but only command the tenants to work, assuring them that the customary rent alone will be demanded. At the times of payment bills are made out according to this rate, for each tenant, and after having paid these for one year his rent cannot be increased without its being alleged that he has cultivated more or better land than he at first did. Great room, however, is left for unjust demands of this nature, as in the bills there is nothing specified but the amount of the rent in money; and the practice of such vague agreements exposes the Zemindar as much as the tenant to fraud, as his agents and the tenants may enter into collusions in forming the first bills. Such practices in letting leases are, I believe, contrary to law.

Those who cultivate for a share of the crop, those who are hired by the month or season, and those who are usually hired by the day, (taking hire is considered so very disgraceful, that few even of the poorest farmers will acknowledge that they perform any work except on their own farms) next require consideration. It is usual to bring as many ploughs to work on the same field as possible, for it is alleged that six ploughs in one day will produce more effect than one plough in six days; and it is the custom to transplant, weed, and reap a field at once, probably for the sake of tumult and bawling in which the natives delight. Poor neighbours, therefore, usually unite on such occasions, and by turns work in company on their respective possessions.

Many tenants who have leases may be said to cultivate for a share, and are often supposed to give more than a half of the produce to the landlord; but there are very few who cultivate the lands of tenants for a share, and in the Behar part of the district they are in general confounded with under-tenants, who pay a rack rent, under the general name Kur-tali; while small tenants, who have only stock for half a plough, are called Adhiyars; but in the Bengalese part those who cultivate for a share are called Adhiyars, while under-

tenants are called Kolayit. It is there that those who cultivate tenants' land for a share are most common, and none of the rent there consists of a share of the crop.

In the Behar part of the district, ploughmen are seldom hired by the year, but generally for the ploughing season alone. They usually in fact sell themselves for that time; for they receive from 5 to 20 r. as a loan, without interest, and, until they can repay that, they ought to work every ploughing season for their master, receiving daily about 3 sers, Calcutta measure of rice in the husk, or of some coarse grain. If the master has 4 beasts, the ploughman works 6 hours; if there are 6 beasts he works 9 hours. He does nothing for his master but work the cattle, either in the plough, or with the plank or rake; so that, if he is industrious, he may do little jobs in the afternoon. When there is no ploughing, the servant is usually employed to weed or transplant, getting a trifle more than his common allowance of grain. The whole profits on harvest is secured by the master to his own ploughman, as far as possible, and many contrive to have the advantage of two harvests; as in the southern and northern parts of the district the seasons of the prevailing crops are different, so as to admit of the same persons sharing in both. Although the allowance for harvest is smaller than in Puraniya, yet the sharing in two harvests, and the higher allowance given daily, render the condition of the ploughman here somewhat better, so that a man and woman who have two children, can spend 2 rupees a month; and it is not alleged, that many of them run away. The money advanced defrays the expense of marriages, funerals, and such ceremonies, and is lost when the labourer dies. His allowance of grain and harvest may amount to 15 r. a year. The woman makes the remainder, in which she is very much assisted by gleaning, most of the reapers having a strong fellow-feeling in leaving her a large quantity of ears. Owing to the extravagant jealousy of the men the women here can, on the whole however, gain less than in Puraniya. In the Bengalese part of the district the ploughmen usually receive from  $\frac{3}{4}$  to 1 r. a month, besides food and clothing, but are engaged the whole year, and perform every kind of labour. Of course their condition is better than in the western parts.

In the southern corner of the district, Belpatta and Kali-

kapoor, although the language spoken is a kind of Bengalese, the ploughmen are called Kamiya, and Krisan, the usual term, is applied to another class of labourers. These have neither provisions, land, stock, nor seed, but borrow the whole, and cultivate as much as they can. When the crop has been reaped, and the expense of this operation deducted from the general mass, the master takes double the quantity of the seed. The remaining produce is divided into three equal shares, of which two go to the master, and one to the Krisan; and out of this he repays whatever provisions he has borrowed, with an addition of 50 per cent. Such people are exceedingly poor. The reward for those who tend cattle is very nearly the same as in Puraniya; old men, women, and boys can at least procure a supply of food by tending the cattle that remain in the villages; and those who tend cattle in the wastes have higher wages than ploughmen; and it is alleged, derive very considerable advantages from the milk, of which they defraud their masters; but they lead a hard life, although not one of severe labour.

There are in this district few Chauthariyas, who, as in Puraniya, plough twenty days on their master's field, eight on their own, and two on that of the person who tends the cattle, the master furnishing the plough and cattle. Day labourers here receive about the same allowance as in Puraniya, that is, about 3 sers of grain a day, or money and grain to the value of between from  $\frac{3}{4}$  ana to 1 ana a day. The condition of the labourer is here no worse than in Puraniya; that of the ploughman is better; nor have I heard, that day labourers here are paid in advance, except when wanted by Europeans. Their number is very considerable.

What I have said in my account of Puraniya, concerning the manners, conduct, and education of the Zemindars, is in general applicable to those of this district; except in one point, in which the Zemindars here most eminently differ and honourably distinguish themselves. In general I found them most attentive and polite to me as a traveller, and more especially those of the highest families, and greatest possessions. Some new and low men about the capital were reserved; but everywhere else I was visited and received with great cordiality; and every assistance was given to supply my wants.

The general management of estates is nearly the same as in Puraniya, only less of the rents, at least until very lately, were farmed out to middlemen, called here Mostajers; but in the southern part of the district the term Mostajer is given to large farmers, who take a considerable extent, and relet it to under-tenants. Some of the estates under the immediate management of the landlords, are badly enough conducted; but all, or at least most of those, whose rents are farmed, are going backwards. When the rents are farmed, the Mostajer generally engages to pay the whole rental that appears on the books of the estate, after deducting the establishment, and this is carefully preserved; so that his only legal profit should be what waste land he brings into cultivation. Little can arise from that point, most farmers leaving the estate as bad, and often a great deal worse, than when they took it. Besides, many give large sums to the owner for the farm, and of course make up this and a profit by vexing the tenants. These, however, are often able to bear additional payments, having much more land than that for which they pay.

The Zemindars, notwithstanding the indulgence that has been shown them in the assessment, have not the least confidence in the perpetual settlement, and take every means in their power to conceal their profits. Imagining that I had come with a view of inquiring how far their taxes might be increased, they were in general anxious to show me statements of their condition, by which it appeared that they had little or no profit. Some, indeed, pretended, that their lands were an expensive burthen. So far as I could understand, these statements were copies of what they had shown when the settlement was made; and seem to have been the foundation upon which it was conducted. I have not the smallest doubt, that these statements are totally unworthy of credit, and that the profits of the Zemindars, where any pains have been taken to cultivate the land, are enormous: but in many places their distrust and caution seem to have prevailed, and they avoid cultivating more than will just enable them to live, and pay the trifling revenue that has been imposed. Some part of the settlement was, I believe, made by measure, and a certain number of bigahs have only been conveyed by the deed. In many such cases I am persuaded, that an actual measurement would discover, that the Zemindars possess much more



than their right, and it would be of the utmost advantage to the country, were they deprived of the overplus. The number of bigahs, which their rights convey, afford abundant means, if used with industry, of giving them ample profit: and of this they would more avail themselves than they do at present, when the immense possessions that they hold for a trifle, were they properly cultivated, appear to them a temptation to oppression that government could not resist. The nominal expense of collection in the part of the district especially that belongs to Behar, is not in general quite so high as in Puraniya; but still is enormous, and arises from the same causes.

Pergunah Bhagulpoor (Bhagulpoor Glad) occupies almost the whole of the Kotwali, and Ratnagunj, and part of Kodwar, Bangka, Fayezeullahgunj, and Kumurgunj. In all, exclusive of hills, rivers, and barren ground, it may contain, abundantly capable of cultivation, 14,20,000 Bigahs, Calcutta measure, or about 900,000 of the customary measure, of which last about 5,50,000 may be actually occupied with houses, gardens, plantations, and fields, and about 3,50,000 are waste. Of course, some such must always remain, for roads, burial grounds, market places, broken corners, and the like, but that need not amount to more than the 50,000 odd Bigahs, leaving 300,000, that are unnecessarily neglected for 5,50,000 that are cultivated. In order to form some notion of the state of different parts of the pergunah, I have calculated as follows:—

	Calcutta Bigah.		Customary Bigah.	
	Total.	Occupied	Total.	Occupied
Kotwali. ....	1,42,800	1,26,000	90,490	79,840
Ratnagunj ....	5,38,200	4,21,300	3,41,000	2,67,000
Kodwar. ....	1,32,700	84,000	84,100	53,230
Bangka. ....	4,36,300	1,51,000	2,76,500	95,040
Fayezeullahgunj .	1,68,228	84,114	1,06,600	53,300
Kumurgunj ....	2,200	1,100	1,400	700
	14,20,428	8,67,514	9,00,090	5,49,110

The usual measure is  $5\frac{1}{2}$  cubits the pole, 18 poles each way, making a Bigah. The pole is laid on the ground, so as to measure exactly its length; but with so short a pole, and the carelessness usual in native measurements, the line followed

will be seldom straight, and the lines will seldom intersect each other at right angles, and the deviations of both kinds produce, in proportion to their extent, a diminution from the proper size of the bigah. If properly measured, the customary bigah contains nearly 22,725 square feet.

In Barkop, the leases are called Meyadi, all for a short number of years; and when these expire, a new bargain is made for what pays money rent (Nukudi); but three-fourths of the rent is levied by a share of the crop (Bhaulti), which is divided equally between the landlord and tenant, after deducting the expence of harvest; but a valuation is usually made, and the tenant, if satisfied, gives the amount in money. The money rent on lands regularly cultivated is one rupee a customary bigah, good or bad, which is at the rate of about 10 anas Calcutta measure; but the Zemindar complains that the tenants never cultivate the fields for more than two years, and then desert them, and go to another waste spot; for large deductions are made to all those who take in new lands, a trifle called Khil being accepted for the first year, and a very poor rent (Kum) for the second. This is intended as an inducement to bring new settlers; but in fact is a powerful means of continuing the present waste state of the country; and therefore ought to be most strictly prohibited. In fact the new land is much more productive than the old, and ought rather to pay a higher rate.

Besides these rents, the Zemindars as Chuklahdar or chief of a district, (Tappa), and as Mokaddam or chief of the contained Mauzas (manors), takes a commission of  $2\frac{1}{2}$  anas on the rupee ( $\frac{5}{32}$ ) of money rent, and of  $2\frac{1}{2}$  sers on the *man* ( $\frac{5}{16}$ ) of grain that falls to the tenant's share. At crop season each Mauza also presents him with three rs., and at different festivals with two rs., one male goat, and one pot of curdled milk. The village establishment is chiefly paid by the tenantry. Eleven (Patwaris) clerks, receive  $\frac{1}{4}$  ana on the rupee ( $\frac{1}{84}$ ) of money rent, with  $2\frac{1}{2}$  sers of grain on each bigah thus rented, and  $\frac{3}{4}$  ser on each *man* ( $\frac{3}{160}$ ) of the tenant's share of the crop, when the rent is paid by a division. Thirty messengers (Gorayits) are allowed a little land at the expence of the Zemindar, and  $\frac{1}{4}$  ser on the *man* ( $\frac{1}{160}$ ) of the grain on lands let for a share. Four Baniyas take the same rate, and measure the grain when it is divided. Almost the whole of

the rents are farmed out in small lots of from two to four Mauzas for a short term of years. The farmers make with the tenants a bargain for the duration of their engagements; and the tenants allege that they are so squeezed that the cultivation is gradually diminishing. The farmers of the rents have no authority to dismiss any of the village establishment.

The general establishment, kept up to collect the money from the farmers of the rents, is as follows: one Dewan or superintendent, 5 rs. a month. One Gomashlah or agent, 7 rs. a month. Three accountants (Mohurers), 10 rs. 2 anas a month. Five Peyadahs or guards,  $7\frac{1}{2}$  rs. a month. Two Kotwals or messengers, 25 bigahs of land. It is evident from these allowances, that each must have perquisites at the expence of the tenantry.

In Parsanda the leases are also granted (Meyadi) for from two to nine years. One-fourth of the land pays a money rent, the remainder pays one-half of the crop. Rice land (Sali), and land (Kheri), said to produce two crops, that is high land in full cultivation, pays money rent from 12 to 22 anas a bigah, customary measure; land of an inferior nature (Vari), if cultivated with the crops called Korwa (Kulthi and Arahar), pays 2 to 4 anas; and, if cultivated with winter crops, it pays from 6 to 8 anas. Here also the Zemindar complains that the farmers will not cultivate more than two years on account of the deduction of rent made for that period. The Zemindar is also Chuklahdar, and on that account, when the crops are divided, he takes one-half of the gross produce, with a commission on the gross produce of  $(\frac{3}{188})$   $\frac{3}{4}$  ser on the *man*. The high castes, all those who lease lands for cultivation, tanners, potters, blacksmiths, washermen, and barbers, pay no ground rent for their houses. All others pay at the rate of  $57\frac{1}{2}$  anas a bigah. The village establishment is in general paid by a commission on the gross produce of the land rented by a share of the crop.

Ten Patwaris (clerks), receive  $\frac{3}{4}$  ser on the *man*  $(\frac{3}{188})$  of grain, and the Zemindar gives them  $\frac{1}{4}$  ana on the rupee  $(\frac{1}{82})$  of the money rent. Fifteen messengers (Gorayits) are allowed  $\frac{1}{4}$  ser on the *man*  $(\frac{1}{188})$  of grain, and from 1 to 5 bigahs of land each. Six Baniyas or measurers, are allowed  $\frac{1}{4}$  ser on the *man*  $(\frac{1}{188})$  of the gross produce. A much smaller

proportion of the rents are farmed than in Barkop, and the estate is not in quite so bad a condition. The general establishment is, one agent (Gomashtah)  $7\frac{1}{4}$  rs. a month. Two accountants (Mohurers), 6 rs. a month. Two Vakeels or agents to attend the judge and collector, 2 rs. Sixteen Peyadahs or guards, some receiving lands, some 2 rs. a month. The village establishment in Fayezeullahgunj consists of six (Patwaris) clerks, who receive from the Zemindar  $\frac{1}{4}$  ana on the rupee ( $\frac{1}{8}\frac{1}{4}$ ) of the money rent; 52 Pasbans or messengers, who receive in all 380 bigahs of land, and subsistence when on duty at a distance from home. The chief establishment consists of one Tahasildar or steward, at 18 rs. a month. Two Peshkars or assistants, at  $5\frac{1}{2}$  rs. each per month. Two clerks (Mohurers), at 5 rs. each per month. One Foldar or valuer of money, 2 rs. per month. Six guards, at 2 rs. each per month. One sweeper, at 4 anas per month. Sacrifices (Dev-Khurch), 3 rs. per month. Stationery, 2 rs. per month. This establishment, it must be observed, is decently paid, having been appointed by the collector, when he managed the estate by an agent.\* The present farmer of the rents has relet part of them to 109 petty tyrants. The tenants on the assessed lands are said to amount to 2007.

Tappa Mandar, belonging to a branch of the present family of Kharakpoor, contains about 64,000 bigahs, of which about 40,000 may be cultivated, and its superior condition to Barkop and Parsanda, in its immediate vicinity, may be attributed to four causes; first, it is much higher assessed, paying 1600 rs. a year; secondly, it has no sort of Ghatwali or irregular military establishment, a constant source of indolence and disorder; thirdly, the amount of the rents is generally stated in the lease, without rate or measurement; and fourthly, the rents are not farmed. It is worse cultivated than the lands north-west from it, owing to being lower assessed, and it is better cultivated than the lands south from it, which are infested by the Ghatwali rabble.

Very little is let on a division of crops, and the tenures seem on a good footing. By far the greater part is let at a rack rent for a certain specified sum for each farm, without

\* I give these as illustrations of the general system in the village tenures.—[Ed.]

any rate or extent being mentioned. This tenure is called Moshukkushi. The leases are, however, rather too short, being only from three to seven years. A little is let from year to year by a certain rate for each bigah. This is called Bighati. The rents are said to vary from 2 anas to  $1\frac{1}{4}$  r. a bigah, the low rates, as usual here, being given only to new comers as an encouragement, and amount to very little of the whole.

These are the outskirts of the Pergunah of Bhagulpoor, which are indifferently cultivated, and very lowly assessed. The remainder is tolerably cultivated. About a tenth-part of it, indeed, scattered in Kumurgunj and Fayezeullahgunj, is only about half occupied, owing to the contagion of bad neighbourhood; but of the remainder, about 70 per cent. is occupied. The free land in the whole Pergunah, entered in the public registers, is 62,476 bigahs and nine entire Mauzas; six of these are in the outskirts already mentioned, and if all the land, claimed there as free, were admitted, it would occupy nearly the remainder; but so far as I can judge from the documents before me, the fact is, that the real quantity there does not exceed 5000 bigahs, and is probably not so much. I shall therefore reduce the total amount in the well-occupied part to 38,000 bigahs and three villages, for which we may allow 2000 customary bigahs; so that the whole of this portion being about 570,000 customary bigahs, the free land will amount to about  $10\frac{1}{2}$  per cent. of the whole, leaving behind rather more than 510,000 customary bigahs. This portion of land is not burthened by any of the irregular military establishment, but the invalid establishment occasions a heavy deduction. The portion however of this establishment, which falls on this part of the district, I cannot exactly ascertain; partly because many of the invalid villages have lands in more than one Pergunah, and partly because the names, by which these villages are usually known, are totally different from their official denomination, so that I cannot trace the respective situations; but perhaps it may be about one-fifth of the whole, which will give about 29,700 bigahs customary measure, purchased by the Company, and 10,000 bigahs still belonging to the Zemindars, but which hitherto have produced no advantage to them. There will still remain 470,000 bigahs at the disposal of the Zemindars, and

this pays to government 85,727 rs. 13 anas, 7 pice, which is at the rate of  $5\frac{1}{2}$  (5.48) customary bigahs, or  $8\frac{1}{2}$  (8.652) Calcutta measure for the rupee, on a soil most extraordinarily fertile. The rented land in this part, in its present condition, cannot be less than 348,000 bigahs customary measure, and the rent on this is not on an average less than  $1\frac{1}{2}$  r. a bigah, giving a gross rental of 517,000 rs. I do not think that I have in any degree exaggerated this rental, and from thence, together with the other lands of the Pergunah, a judgment may be formed of the care which was bestowed on the public interests in the settlement. Had the assessment of the whole Pergunah been made at 150,000 rs., with an annual addition of 10 per cent. until it rose to 300,000, I am persuaded every possible inch would have been now occupied, and perhaps the condition of the Zemindars better than at present; for it being judged prudent that all possible means should be taken to conceal the greatness of their profit, vast sacrifices are made for the purpose. Even in the time of Akbur, when the value of money was comparatively high, the Pergunah, as appears from the Ayeen Akbery, (Gladwin's translation, vol. 2, page 22 of the Jumma), was assessed at 117,403 rs. in place of 99,445 rs. which it now pays.

Perhaps one half of the rent is paid by a division of the crop, the Zemindar, after deducting harvest, taking one-half. The remainder is let for a money rent, according either to 20 different qualities of land, from 1 ana to 4 rupees a bigah; or according to the nature of the crop; the former is mostly adopted on the high lands, the latter on the inundated. A great many of the leases are Gorabandi, which the tenants pretend to be in perpetuity; but the Zemindars allege are only for life. Others are Meyadi, or for a few years. The village establishment here is heavy; and, when the rents are farmed care is taken to keep it undisturbed.

The Patwari or clerk receives from about  $\frac{1}{4}$  to  $\frac{1}{2}$  ana on the rupee ( $\frac{1}{4}$  to  $\frac{1}{2}$ ) of money rent, and generally  $2\frac{1}{2}$  sers on each bigah let in this manner, with  $1\frac{1}{2}$  ana a year, on every house rich and poor. These are paid by the tenant. He gets from the landlord  $\frac{3}{4}$  sers on the *man* ( $\frac{3}{16}$ ) of all the grain received. The Gorayits or messengers wait on the Patwaris, and get each from 2 to 5 bigahs from rent, and 2 chhataks of grain

on the *man* ( $\frac{1}{32}$ ) of the rent in kind. The Baniyas value the money, and weigh the grain, and are allowed ( $\frac{1}{16}$ ) of this rent. The potmaker is allowed half as much. The Chuklahdar knows the boundaries, and receives  $\frac{3}{8}$  of the rent in grain. The Dihidar is a land measurer, and watches to prevent the depredations of cattle. These persons are only employed in some places, and get  $\frac{1}{2}$  of the money rent, and  $\frac{1}{8}$  of the grain rent. Dakchaukis or post boys, get each from 2 to  $2\frac{1}{2}$  bigahs of land free of rent, and transmit from one to another all letters belonging to Zemindars or officers of government, until they reach their destination. The Dosad watches the village by night, and in the day goes messages, and receives from 2 to 10 bigahs of land free of rent, with  $\frac{1}{8}$  part of the rent in grain. All these charges are paid by the landlord. The tenants pay the expense of measurements, which are frequent. No great extent of the rents are farmed, and the practice is chiefly confined to the remote parts that are half cultivated.

The properties are very small, and the owners prudent careful men. Few of them know anything of their family history, some of them not even the name of their grandfather. Many of the smaller cannot read, and in the whole of Ratnagunj the best part of the Pergunah, no Zemindar who resides, has any higher education than to be able to read common accounts, although several of them are Brahmans. Many of them are called Malekiyats or Mokaddams. These were formerly chiefs of Mauzas, that had made an agreement in perpetuity with their landlords, and on the new settlement were freed from vassalage.

Pergunah Chhai (Chihy Glad.) forms a fine estate on the north side of the Ganges, where it occupies almost the whole of the extensive division of Lokmanpoor, and a small portion of Kumurgunj. The land here is measured by a pole applied to the ground, and in some places is 120 cubits, in others only 110 cubits square. The cubits also differ, some of them being 18 inches, others containing  $\frac{1}{2}$  more; but in the most common the pole is of  $5\frac{1}{2}$  long cubits; there being 20 poles square to each bigah, so that this contains 45,050 feet, or is a little more than an English acre, or than  $3\frac{1}{2}$  bigahs of the Calcutta measure.

Of 302,829 customary bigahs belonging to Zemindars, it was

stated, that only 105,424 were cultivated. The most common pretence is, that the whole has been swept away by the river. The soil is indeed much lighter and more liable to injury from floods, than the southern bank of the river ; but on the whole is of a tolerable quality.

In the time of Hoseyn Shah king of Bengal, to whom this part of the country was subject, Chhai was divided among a great many petty Zemindars, under the management of a Tahasildar or steward, to whom a certain Rajput named Yasamanta, was appointed Jumadar, or commander of his guard. Some years afterwards, the concern being profitable, this man purchased 13 (Mauzas) manors from various owners, and took the title of Khan, which, although a Tartar word, is now assumed by many Hindus of rank, and even by Brahmans. At that time there was another Yasamanta residing at Dharhara in Tirahoot, who being a notorious robber, seized on some treasure belonging to the king, who being enraged sent his son to punish the offender. This young man giving himself little trouble in the difficult investigations of the law, and having heard that the robbery had been committed by a certain Yasamanta, took the Jumadar, who happened to be the first person of the name that he found, put him to death and burnt his house. During the execution a faithful female slave concealed the two sons of Yasamanta ; and when the danger was over carried them to Gaur, and presenting them to the king, demanded justice. The king having investigated the matter, found that his son had been guilty, and ordered that he should be delivered to Krishna Das, the eldest son of Yasamanta. The prince's mother applied to this Rajput, and procured her son's pardon, bestowing in return the Zemindary of the whole of Pergunah Chhai, except Tappa Dira, which was left to the ancient proprietor.

By far the largest estate in the district is that of the Kharakpoor Raja, which in the family records is usually called Mahalat Kharakpoor, and is irregularly divided into Pergunahs, Tappas, and Mauzas, and occupies the whole of Tarapoor, a great portion of Bangka and Mallepoor, with some parts of Suryagarha, Lakardewani, Kumurgunj, Gogri, and Ratnagunj. This was formerly the property of a family of Kshetauris, which resided at Kherahipahar, and the Kshetauris were dispossessed by a Rajput. The traditions



current in his family, which, as I have said, differ from those of the Kshetauris, are as follow.

Three brothers, Dandu, Vasudev, and Babu Mahindre, of the Kindwar tribe of Rajputs, and sons of a Singhal Ray, came from their paternal abode at Sibirat, in Pergunah Saruyar, in the west of India, and settled at Masdi, near Kumurgunj. Being soldiers of fortune, they took service and became very great favourites with Sasangkar, the Kshetauri Raja of Kharakpoor. During a friendly intercourse, they had an opportunity of perceiving how his house might be attacked; and on the night of the 7th of Aghan, of the Fusli year 910, (A.D. 1503) having collected a band of Rajputs, they suddenly attacked the house and put the Raja to death. Dandu immediately proclaimed himself Raja by beat of drum, and from time to time destroyed 51 petty Kshetauri chiefs, who had depended on Sasangka, and seized on their estates. This is said to have been in the reign of Ebrahim, king of Delhi, when affairs were in great confusion; but it must be observed that in the inscription at Madhusudan, mentioned in the account of Mandar, the son of Vasudev is stated to have been alive in 1599, which is scarcely reconcilable with so early a date for these events. The date of the inscription is farther confirmed by the accounts of the remaining Kshetauris, which have been mentioned in my account of Parsanda and Barkop. Dandu left his conquests to his son Rup Sahi, who had two sons, Sanggram Sahi and Narendra Ray. The former succeeded in the year 946 (A.D. 1549), during the reign of Akbur, who hearing that in these parts there was a Raja of great pride, who would not pay a tribute, ordered Jahanggirkuli, the Subah of Patna, to destroy the rebel. On this service the subah employed an officer named Bajbahadur, who for some months attempted in vain to force the Raja's entrenchments, at the mouth of the recess in the mountains called Marak-kol. He then gave 1000 rs. to one of the Raja's soldiers, who, in the Fusli year 1008 (A. D. 1601), assassinated his master. The widow, Rani Chandrajysti, and her son, Toralmal, held out the stronghold for six months, when, both sides being tired of war, peace was made; and, on the kind promises of the Muhammedan officer, the family consented to visit Delhi, where Toralmal was immediately thrown into prison. These transactions give no high idea of

either the vigor or regularity of the Mogul government, during its highest perfection, in the end of the reign of Akbur. Jahanggir having released Toralmal, appointed him a Morchulburdar, or person who fans the king with peacocks feathers. During the course of his attendance, being on a hunting party with the king, he attacked a tiger sword in hand and put the beast to death; on which occasion the king was so well pleased, that he raised him to the rank of an Omrao, and converted him and his three sons to the faith in Muhammed.. The Raja then took the name of Rozafzun, and was betrothed to a daughter of Bajbahadur, the officer by whom his father had been assassinated. The young lady, however, considered this marriage as highly degrading, and would not admit the Raja to her bed. His mother was highly indignant at such an affront offered to her son; and, complaining to the king, the Raja was honoured with a less haughty but more illustrious bride, as she was daughter of Moradbukhsh, the king's uncle. The Raja, on this occasion, obtained the command of 3000 horse for himself, and of 1000 for each of his two eldest sons. The youngest became a Fakir, and obtained two mauzas of free land (about 4040 bigahs), which has reverted to the family. The whole of Pergunahs, Haveli, and Kajra, parts of Kharakpoor, were settled on the Raja free of rent, the former for Sanak, or table expense, and the other as Eltumga, or a gift. A mauza also was fixed upon the family as Jaygir, and various commissions were granted to them on the amount of the assessment. These commissions were Zemindars Rusum (two anas on the rupee), Melkiut, Chanda, Kanungoe, Nukudi, and Nankar. The Raja considers the whole of these as completely separated from the Zemindary, and as his property, were the lands to be sold for arrears of revenue; and the Jaygir Eltumga and Sanak are no doubt entered in the public records. The claim to the others is doubtful, as in all probability the Zemindar, when these grants were made, accounted to the king for the whole proceeds, and was allowed the above commissions for his trouble and profit; and of course his claim ceases when he no longer performs the office. The Raja, after obtaining these favours, was allowed to visit his estates; and his second son obtained the office of Morchulburdar. In the year 1038 (A. D. 1631), Raja Afzup

died, and was succeeded by his eldest son, Raja Behroz. His brother, Abdul Singha, having died, the Raja obtained his office, and, while he held it, distinguished himself in battle, and obtained some lands, called Chuklah Medanipur, in the Virbhum district, which have been since lost. He was then appointed Sahur Nesham, or royal standard bearer, and returned to enjoy his estates. He had four sons, Tahuyar Singha, Hoseyn-kungyar, Bahurbur-kungyar, and Kungyar-Garshayestah. The family seems still to have had a hankering after their original customs, as each of these sons took a Hindu title. Tahuyar succeeded his father, and had seven sons. The eldest went to Delhi, and became sword bearer of Aurungzebe. He accompanied one of the king's sons on a hunting party and killed a wild buffalo sword in hand, on which occasion he obtained a grant of the estate called Garhi; but before he could take possession he died of the small pox. He left two sons, Arjus, or Rozafzun the second, and Muhammedazum, or Abedsur. The eldest became Raja, and succeeded to his father's office in the year 1134, during the reign of Muhammed Shah. In 1141 (1734) he died, and left his estates to his son Mozuffur ali; but, owing to his youth, the management for seven years devolved on his uncle. When Mozuffur ali grew up he entered into the service of the Subahs of Bengal, who had then become independent, and served Mahabutjung, Serajuddoulah, and Jafurali Khan. When Kasem Ali rose into power, he sent into Kharakpoor a Tahasildar with 5000 men, to levy money, and the Raja retired to Ramgar, but was persuaded by Buali, brother of the Subah, to come to Mungger, where he was thrown into prison. Soon after his family was caught and plundered; but about this time, the English army advancing, Kasem Ali retired to Patna, and in the confusion the Raja made his escape. On the restoration of Mir Jafur, a Muhammed Aziz, was sent into the country in command of the troops, and he plundered it. After him came a Mir Haydur Ali, who allowed the Raja no authority, and gave him no commission. At this time a Mr. Barber, if I understand the native pronunciation, was at Patna, and to him Mozuffur sent his son to complain. The gentleman, having made inquiries, sent back the young man with an order, that the arrears of commission should be paid, and displaced the officer (Foujdar) who commanded in

Kharakpoor. When Shetab Ray obtained the management of the revenues of Behar, Abutaleb, the officer commanding in Kharakpoor, lodged a complaint against the Raja, alleging that he was a turbulent bad man, on which account the Raja was again deprived of all authority, his house was plundered by the officer, and his family was thrown into prison; but he effected his escape into the forest of Jagannathdev. The Raja now sent an agent to Moorshedabad, and complained to Mozuffurjung, then the justice general (Foujdar) of the province, who issued orders to Shetab Ray, that justice should be done. Accordingly Fuzulali, the Raja's son, and the family were released; and Abutaleb, the officer who commanded in Kharakpoor, was recalled. This wretch, knowing the fate that awaited him, took poison, and his whole wealth was secured by Shetab Ray, who restored nothing to the family, and sent another officer who allowed the Raja no more authority than the former had one. On this the Raja sent his son and Bholanath, his dewan, with another complaint to Moorshedabad; but by the way they met Shetab Ray, who sent the son back and persuaded the dewan to accompany him to Calcutta. The Raja, knowing by this that his dewan had betrayed him, sent another agent to Calcutta, who gave security, and obtained an order that the management of the estate should be restored to the Raja. About this time the house of Prandatta, the Kanungoe, or register, was robbed, and the officer commanding immediately sent a charge against the Raja, as having been the perpetrator, which his family of course deny; but it was believed by government, and a European subaltern, Mr. Clerk, with two companies of seapoys, was sent to protect the native officer (Tahutdar), who was appointed to manage. On this the Raja retired to the forests, but sent his son to meet the officer. When the young man came within a day's journey of the seapoys, some treacherous Ghatwals informed the officer that he had brought many men and intended to fight. On which the officer marched by night, and, surprising the party, put many to death; but the Raja's son made his escape. Then Mohan Singha, a Rajput Ghatwal, informed Mr. Clerk where the Raja was concealed, and this officer, advancing suddenly, caught the Raja and sent him to Patna, where he was put in irons. In 1177 (A. D. 1770) he petitioned against the Ghat-

wals and native officer. They were called before Shetab Ray, their accusation declared groundless, and the Raja was released from prison, but ordered to remain at Patna.

On the 24th of Magh 1183 (A. D. 1776), before any investigation took place the Raja died, his son Kader ali having been born a few days before, and having received (Tika) the mark of Raja from Prasad Singha, who is the head of the family, and still a Hindu, who receives an annual allowance from the Raja. Rudramohan, the faithful security, informed Mr. Barton that the Raja had no son, and that the proper heir of the family was Mahusen ali, a half-brother of Fuzulali's, and who being an idiot, was a proper heir for a manager. Some time afterwards Mr. Barton found his error, and in 1188 (A. D. 1781), Mr. Hastings issued out an order (Purwanah), directing Kaderali to be put in possession. Such is the account given by the family. How far it is true I cannot say; but in the modern events there is nothing improbable. It is however very likely, that in the confusion which ensued during the overthrow of the Mogul government, Mozuffur might have refused payment of the revenue; such being the usual practice whenever there is a want of military force.\* Kaderali is a man of plain unaffected manners, but exceedingly obliging. His disposition is said to be mild and just, but he has been expensive, and is involved in pecuniary difficulties, in order to extricate himself from which he has farmed the rents of almost his whole estates to a man, who has advanced him large sums of money, who has thus very great authority, and is said to abuse it by oppressing the tenants.

According to the space which Kharakpoor occupies on the map, it contains about 47,69,000 bigahs Calcutta measure, of which I conjecture about 8,97,000 may be rivers, marshes, hills, rocks, or barren land, and 38,72,000 fit for the plough. As the whole pays only to government 68,155 rs. 10 anas 13 gs. we may readily conclude, that it is in a wretched state of cultivation; and, so far as I could learn, not more than 16,50,000 bigahs are occupied. The condition perhaps, would on the whole have been worse, had not vast alienations

\* The history of this family has been given entire, as it will serve to shew the manner in which many estates have come into the possession of their present occupiers, and how Zemindars or tax gatherers, were converted into the actual proprietors of land.—[Ed.]

taken place, so that the assessment is somewhat more decent on the remainder, and there some stimulus has been given to industry, the example of which, and its advantages, prevent the other parts from being totally abandoned.

The estate called Chandwe Pasoi, belonging to Div (Lord) Rupnarayan, so far as I can conjecture, amounts to almost 7,40,000 Calcutta bigahs, of which 1,17,000 may be rivers, hills, rocks, or otherwise barren, and about 25,000 may be cultivated. He has a great extent of the fine land on the banks of the Chandan, and these are fully occupied, and let for rent. The cultivated lands scattered thinly through the woods, are in general given free of rent to the younger branches of the family, to servants, and to the armed rabble that keeps up his notions of self-importance.

In the assessed land Rupnarayan grants leases for from two to four years to each tenant, specifying by conjecture the extent of the possession, and the rate at which such as is cultivated, is to pay. When the lease expires, the rate may be altered; but this is not usually done, there being few tenants and much land. The estate is divided into seven Pergunahs; but he possesses only one Pergunah in whole, of the others he has only portions. The measure differs in each, the largest being 125 cubits square, and the smallest 99. The latter is that used in Chandwe Pergunah, of which he possesses the whole, and the rates by which he lets the land there, are as follow:

			Customary bigah.	Calcutta bigah.
Rice and sugar-cane land, best		anas	48 0	32 7
Do	2nd.		32 0	20 18
Do	3rd.		16 0	10 9
Do.	4th.		8 0	5 4½
Two crop land, best	-	-	24 0	16 3½
Ditto, worst,	-	-	8 0	5 4½
Wheat and barley, best	-	-	12 0	7 16½
Ditto, worst	-	-	3 0	1 19½
Maruya, best	-	-	6 0	3 18½
Ditto, worst	-	-	3 0	1 19½
Mustard	-	-	12 0	7 16½

These are the principal rates paid in money,\* most k

\* I have given this as one of many illustrations by the author of the various rents of land on one estate.—Ed.

of pulse pay a certain quantity of grain for each bigah, and a little is let by a division of the crops. On the whole, the great crop being rice, the rents should not be less on an average than 12 anas a Calcutta bigah. The Zemindar however pays for keeping the canals in repair. None of the rents are farmed; and, had the armed rabble been dismissed, Rupnarayan must have had the credit of being the best landlord as a manager in the district. His manner of living has no sort of splendour, but he is lavish to religious mendicants with whom the country, from being the route to Baidyanath and Jagannath, is dreadfully infested; but still he has probably large hidden treasures. It must be observed, that he pays 8,168 rs. a year for 633,000 bigahs of land capable of being ploughed, or 1 r. for  $77\frac{1}{2}$  bigahs; for I believe, that he is burthened with very little free land, except that assigned by himself for his establishment. Pergunah Kajra is a very fine estate, it contains 25,000 customary bigahs, and at least 20,000 of these are cultivated, being in the immediate neighbourhood of Suryagarha, where very considerable activity prevails.

The leases are usually for a short term of years, from four to seven, and the Zemindar alleges, that when a lease expires, he may increase the rent; but he seldom does so, because tenants are difficult to procure. The leases are given to one or two men in a manor (Mauza) with an &c., mention only the rates, and only what is cultivated pays rent. A few have leases for a certain farm without its extent being mentioned, but the amount of the rent is specified, a tenure which is here called Thikabandi. A few others have extent and rent defined, are called Mokurruri, and here are considered as perpetual. The rates, on what is paid by money rent, are fixed according to the value of the soil; which in some places is divided as far as 20 qualities, in others as far only as eight, and the rates are low; but this is of little consequence, as by far the greater part of the rents are collected by a division of the crop, and are therefore very high, when the Zemindar is not defrauded; but on such an extensive estate the frauds are enormous.

The village establishment is as follows: the estate is divided into Chuklahs, over each of which presides a Chaudhuri or Chuklahdar. Some of these are paid in land called

Nankar, and are besides allowed 3 per cent. on the rupee paid by the tenant. Others are allowed 2 anas on the rupee. In fact both pay annually a sum of money to the Raja, who thus keeps his accounts low. Under the Chuklahdars are Mokaddams or head men of manors, and Patwaris or clerks; but sometimes one Mokaddam has two clerks, and one clerk usually manages two or three manors (Mauzas). The Mokaddam takes from the tenant  $\frac{1}{2}$  ana on the rupee of money rent, and 1 ser on the *man* of grain before division, or  $\frac{1}{40}$  of the crop. Some of them have also free lands. The clerk is allowed half as much as the Mokaddam. Each is allowed a Tahalu or servant, who receives from 1 to 5 bigahs free of rent. For every two or three small manors there is a watchman (Pasban), and large manors have two or three. Their duty is to watch the villages by night, and to collect money in the day. From the Raja they are allowed from 4 to 7 bigahs each, and  $\frac{1}{160}$  part of the grain before it is divided; and each tenant gives the watchman of his village  $2\frac{1}{2}$  sers of grain. Almost the whole rents are farmed, which excites loud complaints.\*

Pergunah Furrokhabad Serkar Orambar is not mentioned in the Ayeen Akbery. It belonged to the Register of tenths of Bengal, and his representative still retains the property of all that is in this district amounting to about 100,000 customary bigahs (79 cubits square) of arable land. The estate is very fully occupied. One-fourth of the tenants have leases, in general such as are called Meyadi; but no term is stated in the lease, and the agents of the landlord say, that they may be turned out at will, the intention of the lease being merely to ascertain the rent that is to be paid during occupancy. The remaining tenants have no leases; but at the end of the year take a receipt (Farugkhut), for what they have paid, and it is understood, that next year no more

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\* In some parts of the country, a common part of the village establishment is a man to encourage the tenantry to work, or rather by repeated exhortations and dunning to compel them to labour. Their indolence, owing to too low rents, would render this a very useful service were it effectual; but I believe it does very little good, and the man is usually pacified by a little grain. When he has no other employment he is called Halsahana; but in general in order to give him more weight, this officer is also charged with collecting the rent, and is then called Dihidar.



rent can be demanded. The agents say, that Mr. Turner, when acting judge, determined these receipts to be of no avail, and that at the expiral of the year, the landlord might re-let his lands at whatever he could obtain. A contrary decision in a similar case, in the western part of the district has been given by the present judge. The law on this point would therefore seem to be rather uncertain. There can be no doubt, that the decision of Mr. Turner is most adapted for the benefit of the country.

The rent of one-fourth is fixed on the Hari or bigah, without reference to the crop. Some of this pays a commission, some does not. Where there is no commission, the tenant gets from 1 to 6 bigahs for the rupee, all tolerable land being above 10 anas for the bigah. Where the commission is taken, the rent is from 2 to 10 anas a bigah. The commission varies from 4 anas (Seway) to 2 rs. (Tetaki) on each rupee of rent. Three-fourths of the lands are let by a certain rate on the bigah, according to the crop with which it is sown; and part of this also is let without commission, part pays. When there is commission, ordinary farmers pay 2 rupees for each rupee rent, Mandals or managing tenants, pay 1 rupee on each rupee of rent, and the high castes pay  $\frac{1}{4}$  rupee on each rupee. The following are the rates where commission is exacted.

	Rent.		Rent and Commission.							
	A.	G.	High Castes.		Mandals.		Farmers.			
	A.	G.	A.	G.	A.	G.	A.	G.	A.	G.
Rice and Mustard . . . . .	5	10	6	17 $\frac{1}{2}$	11	0	16	10		
Wheat, Barley, and China . .	4	10	5	12 $\frac{1}{2}$	9	0	13	10		
Sesamum and Linseed . . .	4	0	5	0	8	0	12	0		
Masur and Khesari . . . . .	3	0	3	15	6	0	9	0		
Sama, Kodo, and Kangni . .	2	10	3	2 $\frac{1}{2}$	5	0	7	10		

Very little produces two crops. All ranks pay house rent, in general very high, about 5 rs. a bigah; but the high castes pay only about half as much.

AGRICULTURE OF THE HILL TRIBES.—The southern tribe, in some respects, have made less progress than the northern; in other respects they have advanced farther. Their hills are cultivated with less care, neither do they rear cotton nor Cytisus Cajan, which are two of the most valuable crops that the northern tribe possesses; but many of them have adopted the plough, and use it not only to cultivate rice in low land, but

to cultivate swelling grounds at the bottom of their hills, after these have been enriched by a long fallow, and have been overgrown with trees. On both the hills and swelling lands, after two crops, the field is allowed to remain waste for from five to seven years, during which the trees shoot up to the size of large coppice. In Asharh and Sravan (14th June, 15th August), the men cut down all the trees on the space intended to be cultivated. In Chaitra and Vaisakh (13th March, 12th May), both men and women are employed burning the dry sticks. Then in the hills, with the early rains, the women chiefly dig small holes, at little distances, by means of a stick pointed with an iron about three fingers broad; and in each hole they put some seeds of Goronri (Maize), Jonola (*Holcus Sorghum*), and Kalai (the kind of pulse, which in the Hindi dialect is called Bora). They then sow the surface broad cast with two kinds of millet called Kheri and Kangni. Sometimes they reverse the progress, and sow the millet first. Next year they only plant the Maize and Sorghum, after which the field is allowed another fallow. On the swelling ground the field is slightly ploughed, and in the winter between the two crops rape-seed and Sesamum are sown broadcast. A field of this kind is called a Vari, and every other year the cultivators move their huts to the new field. These huts are very wretched, but have near them some plantains, capsicum, and vegetables. Part of their food consists of wild yams. The pulse is reared chiefly for market, to procure them a supply of salt, iron, clothes, and finery; but of the two last articles they procure very little. Their chief means, however, of procuring foreign articles is by making charcoal, which would afford them an ample supply, were they not totally abandoned to drunkenness; and in preparing drink consume a great part of their grain, so that the charcoal which they make is chiefly sold for rice.

The northern tribe is more industrious and sober, although both men and women often get very drunk. They cultivate the hills alone, and it is surprising what crops are produced on the steepest declivities, covered so thickly with loose stones that you can scarcely walk except by stepping from one to another. The field is cleared exactly in the same manner as among the southern tribe. On the two first years

it is planted with a variety of articles. Small holes, two or three fingers deep, are made in the interstices between the stones; and in each are dropt 10 or 12 seeds, taken by chance from a promiscuous mixture of the following articles. Maize, called by these people Tekalo, is in the greatest quantity, and is of two kinds, one gathered in Asharh (14th June, 14th July), the other in Aghan (15th November, 14th December). Naitu, a species of *Holcus*, called in the plains Gehungya Janera, is reaped in Paush (15th December, 12th January). The Kusora, the species of pulse called in the plains Bora, is reaped in Aghan (15th November, 14th December). The Kodom, or Eleusine Corocanus, which is of two kinds; one gathered in Bhadra (16th August, 15th September); the other in Aghan (15th November, 14th December). The *Pennisetum* or *Panicum italicum*, is gathered in Bhadra (16th August, 15th September). The smallest of these articles is the Lahari or *Cytisus Cajan*, which is of two kinds; one gathered in Paush (15th December, 12th January), the other in Chaitra (13th March, 11th April). Although the quantity of the last mentioned seed is comparatively small, it grows so luxuriantly, that, when I visited the hills, after all the other crops had been removed, no traces of them could be discovered, and the whole fields were covered with a rich close crop of this valuable pulse. On the third year the best fields are sown with cotton, and the poor are allowed to run wild, as is also done with the best, after the cotton has been removed, and the trees are allowed from 8 to 12 years to recover. I have nowhere seen more thriving fields of cotton, and have no doubt that its sale might procure an ample supply of all foreign commodities that these people want; but they exchange part of their grains for rice, and supply the lowlanders with timber and charcoal. The men cut down and burn the trees, make charcoal, and carry this and timber to market; but pass a great part of their time in hunting. The women sow and reap. Rich people occasionally hire the poor, and give a woman two p<sup>aysas</sup> a day ( $\frac{1}{3}$  part of a rupee) to plant; but she works only until noon. At harvest she works the whole day, and will bring home from 40 to 60 baskets of ears, each giving about 3 sers (104 s. w.) or 8 lbs. of grain: for her trouble she receives one basket.

## CHAPTER VI.

## STATE OF THE ARTS, MANUFACTURES AND COMMERCE IN BHAGULPOOR.

**ARTS.**—For an estimate of the number of artists, see Appendix.

Sculpture, statuary, and painting, are on as bad a footing as in the districts hitherto surveyed. The painters are employed as in Puraniya. Of music there is an extraordinary abundance. Mirasin, are a kind of dancing and musical girls, who perform before Muhammedan women of rank. They are confined to Rajmahal, where there are two sets, containing five girls. The common dancing girls, Bai, are much on the same footing as in Puraniya, but are rather inferior, and all profess the faith in Muhammed, except two sets, at Bhagulpoor, of the kind called Rumzani. These happen to be the best in the district. In the southern part of the district, are a few sets of another kind of Hindu dancing girls, called Kheloni. They are exceeding bad dancers and singers, but endeavour to excite a laugh by some jokes suited to the capacity of the spectators, who are easily pleased. There are none of the sets of proper dancing boys (Bhaktiyas); but several boys dance and sing. Among these are the Jhumariyas. Each set consists of two or three men, who are musicians, that beat the drums called Tabla, and Mandira, and of two boys, who dance and sing dressed to represent Krishna, and Radha. The songs relate to the amours of these deities. These sets are employed at marriages, and receive about eight anas a day, and food. They are mostly weavers, and, when not employed in their musical profession, exercise the shuttle.

The Bhongrs are impudent fellows, who make wry faces, squeak like pigs, bark like dogs, and perform many other ludicrous feats. They also dance and sing, mimicking and turning into ridicule the dancing boys and girls, on whom they likewise pass many jokes, and are employed on great occasions. Of the Pirergayan, employed by the Moslems to sing

the praises of their saints, there is only one set. At Rajmahal, however, are ten houses of Piranis, the men, women, and children of which sing in honour of certain saints, whenever any one is afraid, and hire them to perform this kind of worship, which is performed in the houses of the Piranis. No woman who has any concern for her reputation, performs on any musical instrument; but women of some low tribes sing at marriages and festivals. There are a great many dissipated young men, who, in their cups, sing and beat on small drums; but men of rank and gravity totally reject such indecorous levity.

I heard of no persons who live by singing the praises of ancient heroes. The Daphalis are a kind of low Muhammedans, who beg on the strength of singing amorous ditties, accompanied by a tambourine. The Nariyals are men of the Goyala and Beldar tribes, who are employed to dance at marriages, and receive a share of the feast. The Bazigoors are jugglers, tumblers, and balancers, who amuse the people; and it must be remarked, that they have fixed their residence in the wildest parts of the country.\* There they keep their children and old people, while some young men and girls stroll about the country, during the fair season. The girls are those who in common shew all the feats of activity, and often those of dexterity; but in the latter they are much inferior to strollers from Madras and Delhi, who sometimes visit the country. The Chambas amuse the populace with tame bears and monkeys, and sometimes cut themselves before timid persons, in order to extort charity by compassion. One at Mungger, called a Gorajwaleh, procures money from such persons by threatening to run a spike into his breast. At Mungger, the people of one house live by making a coarse soap. The house contains four persons, men and women, who in eight days can make a batch. They take one *man* (84 s. w. the ser) of tallow (86½ lb.) worth 5½ rs, and linseed oil 6¾ sers (14½ lb.) worth 1 r. They boil these in a large iron vessel for 4 days, adding to them gradually a ley, made by filtering water through 25 sers (53 lb. 14½ oz.) of quick lime, worth ½ r. mixed with 20 sers (43 lb. 2 oz.) of coarse carbonate of soda, worth 1 r. Then the vessel is exposed three days to the sun,

to dry. Next day, it is boiled again, and becomes thick, when it is made up into balls of from  $\frac{1}{2}$  to 2 lb. weight. The materials cost 8 rs, the firewood costs 4 anas: the workmen procure  $1\frac{1}{2}$  *mans* (150 lb.) of soap, worth 10 r. 11 a., so that their profit is 2 r. 7 a. They have a ready sale.

The barbers of the Bengalese part of the district, Napit, are as haughty as in other parts of that country; but the Nais of Behar are more condescending, and better operators. Among them are a few of the Muhammedan faith. They make good wages, and some, having acquired wealth, have become ashamed of their profession, and betaken themselves to the study of liberal sciences. In some parts there are a kind of surgeon barbers, called Jurrah.

In the Behar part of the district, bracelets (*churi*) of a coarse kind of glass called Kangch, are a good deal used. In my account of Mysore, I have given the process used. There are several kinds of Kangch. The cheapest and most easily made is black, and perfectly opaque. The workmen take 4 sers ( $8\frac{6}{10}\frac{4}{10}$  lb.) of impure carbonate of soda (*Sajimatti*), and powder it. They then place it in the crucible of the furnace, and heat it for twelve hours, stirring it occasionally, until it melts. They then take it out with an iron ladle, and throw it into cold water. They then powder it again, and afterwards put it into the crucible. It melts in three or four hours; but is kept in this state all the day, and is frequently stirred with the ladle. In the evening it is taken out in ladlefuls, poured on the ground, and allowed to form cakes called Thaka. Next day, the cakes are put again into the crucible; and, when melted, are formed into rings, as I have described in my account of Mysore. The impure soda gives  $\frac{1}{2}$  of its weight of glass.

The furnace is made of unbaked clay over a hemispherical hole, that serves for a fire place. The upper part of the furnace also is hemispherical, and within does not exceed a cubit in diameter. The crucible fills the whole space from side to side, so that the flame does not reach the materials which it contains, and only envelopes its bottom and sides. Four little walls on the outside, about four inches thick and six inches deep, strengthen the outer part of the furnace, dividing it into four spaces. At the bottom of one is a hole, through which the fuel is thrown into the fire-place; and the smoke comes out by another hole, which is formed at the

bottom of the opposite space. Above this is a large hole, by which the materials are introduced into the crucible; but this is afterwards shut by a plug of fresh kneaded clay, which can be removed to stir the materials or to take out the melted mass. At the two other sides, opposite to each other, are two apertures, through which the melted glass is taken with a rod to make the rings, a workman sitting at each. These always remain open.

Another kind of glass is greenish, and a little diaphanous. To make this the workmen take about 7 sers of the impure soda, and make it into a paste with a little water, forming it into cakes of about  $\frac{1}{4}$  ser weight. These are put into the crucible, and in about 24 minutes become red. The fire is kept up until night, but is then allowed to go out. In the morning the cakes are taken out and powdered. The powder is then put into the crucible, before noon melts, and is taken out and thrown into water. The slag is then powdered and dried. Next day the powder is again put into the crucible, and melts before noon. It is stirred all day, and in the evening is taken out and poured on the ground to form cakes. If the last melting is continued long, the green colour is pale, and is called white; if continued for a shorter time, it is deeper, and is called green; but inclines to blue.

There is another green glass, of a bright grass colour (*Zumorrodi*) and more diaphanous. The process goes on as in the former case, until the materials have been thrown into water and powdered. To this powder is added  $\frac{1}{16}$  of a black carburet, or, perhaps, merely a peroxide of copper, prepared as follows: take a quantity of copper, and make it into very thin plates; take a piece of moistened cotton cloth, cover it with turmeric made into a paste with water, and then sprinkle the surface with salt (muriate of soda); place on this the copper, cover this with salt, that with a paste of turmeric, and that with cloth; then heat them on the outside of the furnace for four or five days. During this the vegetable matters are reduced to charcoal and have penetrated the copper, which is then powdered and is quite black.

Another glass, of a bright deep blue (*Asmani*), is made in the same manner, only the matter added is a metallic slag called Rung, which comes from the west of India, and sells at  $2\frac{1}{2}$  rs. a ser. It probably contains cobalt; but, previous

to being put with the other materials, is powdered with a little muriate of soda, and becomes black. The powder, when heated, emits copious fumes, but has neither the smell of arsenic nor sulphur; 3 sers of the powdered glass require 3 chhataks of the Rung, powdered with a little salt.

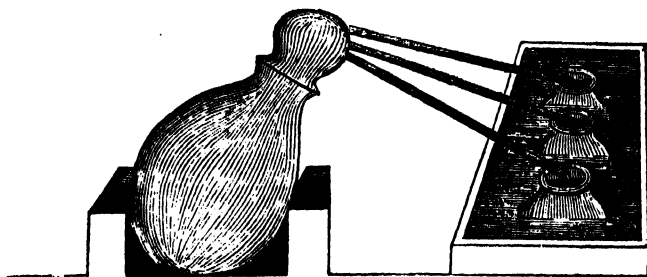
Another glass, of a brownish purple (*Uda*) colour, and somewhat diaphonous, is made by adding a stone called Sengr, which comes from the Ramgar hills, and sells at  $1\frac{1}{2}$  ana a ser. The stone is powdered, and about  $\frac{1}{4}$  ser of this powder is mixed with 1 ser of the powdered glass, after it has been thrown into the water.

The workmen make also two enamels, that are applied to the surface of some of the rings. One is yellow, 5 chhataks of lead are melted in an oblong earthen shallow crucible. To this is added 1 chhatak of tin, and the alloy is calcined for between four and five hours. When calcined, and heated to redness, it is taken out, powdered, put into the crucible of the glass furnace, and heated to redness. Then is added a chhatak of powdered white quartz, and the mass is stirred about for three hours. It is then taken out with a ladle, poured on a smooth stone or iron, and cooled in water. The workmen, having melted one ser of the palest green glass, added  $\frac{1}{4}$  ser of the above materials, which makes the yellow enamel. The green enamel is made in the same manner, only to the melted glass are added, not only the prepared lead and tin, but  $\frac{2}{3}$  chhatak weight of the black powder of copper prepared as before mentioned. These glass rings are often coated with lac coloured gaudily, or ornamented with tin and copper foil.

The tanners, as usual, are of two kinds. Those who make shoes, ropes, drum-heads and saddles, and cover baskets, in the western parts are called Chamar, and in the eastern Muchi. Some at Mungger make very neat shoes, after the European fashion; and partly there, partly at Bhagulpoor, are about a dozen houses, the people of which make neater shoes of the native fashion than are made in any of the districts hitherto surveyed. Those in the villages, forming the great mass, live chiefly by making shoes and ropes for the farmers, and form a regular part of the village establishment. They are paid chiefly in grain, and each family may make 3 rs. a month. The good workmen in towns make 5 or 6 rs. a month.



The distillers are, in proportion to the population, more wealthy and numerous than in any of the districts hitherto surveyed; and they distil entirely from the Mahuya flowers (*Bassia*). The dry flowers, with from equal to double quantities of water, are put in round earthen pots with rather narrow mouths, and exposed to the weather to ferment. This process is finished in from four to eight days, according to the heat of the weather. The whole fermented mass, flowers and water, is put into a still, and the spirit is drawn slowly off. It is never rectified, and after distillation is always very much diluted with water, owing to which it will not keep above 15 days, and it is best when fresh from the still. If rectified, or even if kept undiluted, it would preserve longer, but the customers would not have enough for their money. The dilution is usually a quantity of water equal to that of the spirit. The water is sometimes put into the recipient before the distillation commences, and at others is added when the operation has finished. The still is a large earthen pot, as here represented, placed, inclining a little to one side,



over a fire place, confined by two walls of clay. The head of the still is a small earthen pot inverted on the mouth of the larger, and luted with clay. Three tubes, more or less, of hollow bamboo pass from the head to an equal number of narrow mouthed unglazed earthen pots, that serve as recipients, and are placed in a shallow cistern containing water. A boy attends and pours water alternately over the pots.

The estimates of profit and loss, which I received, vary a good deal, as might be naturally expected. At Bangka, a man, who pays 8 anas duties a day, gave me the following account: 20 sers (80 s.w. a ser) of dried flowers are used daily. They are put into four pots, each containing 13 sers

of water. When fermented, they are distilled, one pot being drawn off at a time; of course the still is drawn off four times a day. At each time 5 sers of liquor is procured, that is 20 sers a day. To this he adds 30 sers of water, which gives 60 bottles of liquor. He sells the bottle for 2 paysas, so that the 60 bottles bring 1 r. 13 a. His monthly gain is therefore 54 r. 6 a. His expense is as follows: to 15 *mans* of flowers, 12 r.; firewood, 2 r. 13 a.; a servant's wages, 2 r.; pots, 15 a.; duty, 15 r.; total, 32 r. 12 a. Profit, 21 r. 10 a.

At Jamdaha, a distillery, which paid at the same rate of duty, uses a larger still; as, at each time it contains 10 sers of flowers; but then the owner distils only twice a day, and seems to draw off the spirit more slowly, and by this means brings over also more of the water, so that from the 20 sers of flowers, daily distilled, are obtained 32 sers of spirit, to which is added, an equal quantity of water, that renders it a very poor stuff. Although the owner thus procures 64 sers of liquor, he can only sell 56 sers, as every man who drinks, must be allowed more than the measure, for which he pays. The flowers, when I was at Jamdaha, having risen to 1 r. for 40 sers, he had raised the price to  $2\frac{1}{2}$  paysas a ser. His daily sales, therefore, were equal to 140 paysas, of which 68 were then equal to a rupee, so that his sales amounted to rather more than 2 r. a day. His expenses were—flowers, 8 a., wood, 5 g., servant, 1 a., pots, &c., 15 g., and duty, 8 a., total 1 r. 2 a.; profit about 14 anas a day.

At Mungger, a man who pays 5 rupees a day as duty, says that he daily draws off 14 stills, each containing 15 sers of flowers. If the best liquor is required, he only draws off 4 sers from each still; but what is in most common demand, is made as follows: 16 sers of cold water are put into the recipients, and the distillation is continued, until the liquor procured amounts to 28 sers; but these can only be sold for 24. The price, being  $\frac{1}{2}$  ana a ser, amounts to 12 anas for each still, or in all to  $10\frac{1}{2}$  rupees a day. The usual price of the flowers being 40 sers for the rupee, the expense will be as follows:—flowers, 5 r. 4 a., servants, 5 a., pots, 1 a., fuel, 7 a., and duty, 5 r., total, 11 r. 1 a.; so that he loses daily 9 anas: but this is quite absurd, more especially, as I am informed by one of them, that, besides the duties paid to government, it is customary to give a sum to the native officer, who superintends

this branch of revenue; and that last year, on this account, no less than 1500 rupees were given in Mungger. The other accounts are probable enough, as the profits mentioned would allow considerable deductions.

In Kalikapoor, one family prepares a fermented liquor (Pachoi) from grain, which is not distilled. The oilmakers are fully as poor as those of Puraniya. It is only at Mungger and Rajmahal, that a few have two mills, and many mills are provided with only one beast. About  $\frac{1}{8}$  purchase the seed, and sell the oil,  $\frac{1}{8}$  grind for hire. Except the mill and beast, with perhaps one or two rupees' worth of seed and oil, they have no capital. Some even have not a beast, but turn the mill with their own hands. The Dahiyars, who make curds and boiled butter, are numerous, and have more capital than those of Puraniya.

The Halwais, who prepare sweetmeats after the fashion of Hindustan, are numerous. They make also a small quantity of the sugar called Chini, which has been formerly described; and also some of a coarser kind called Shukkur, which is that most commonly used in this district; but I had no opportunity of learning the process.

*Workers in more durable materials* :—blacksmiths and carpenters are so intermixed, that it is with difficulty that they can be separated; for those who make the implements of husbandry, in some places are called Barhai, and in others Lohar. In some places the same persons make the whole implements of agriculture, wood and iron, and coarse work of both kinds; while in others the two professions are separate, although in general the people are considered as belonging to the same caste. These country tradesmen form a regular part of the manorial establishment, and are usually paid in grain for the implements of agriculture.

At Mungger and Bhagulpoor, are some workmen who make household furniture, superior to what is made in the districts hitherto surveyed; and these persons make a great deal after the European fashion, which they sell to passengers, and sometimes send to Calcutta. The articles chiefly made are chairs, stools, couches, and bedsteads; but they also make some tables, although the pieces of timber that are procurable are not of a sufficient size, and in order to form a leaf, must be joined. The furniture is neat and cheap. The

same people, if desired, will make palanquins and carriages, and when looked after, and furnished with sound materials, are clever workmen. There are at Bhagulpoor about thirty workshops, and at Mungger about forty. In each shop are from two to ten workmen. The master sometimes hires the workmen, and furnishes materials and implements. At other times, all the workmen are partners. Journeymen's wages are from  $1\frac{1}{2}$  to 2 anas a day. The carpenters of Mungger are the best, and chairs, stools, couches, and bedsteads may at all times be had ready made. At Bhagulpoor, well-finished work is seldom procurable, without being commissioned. Two or three shops in Gogri make the same kind of goods, and send them to Mungger for sale. Three houses in Bhagulpoor, and five at Mungger, have some stock, from 1 to 3000 rupees each.

At Mungger, are seven houses of Goyalas, or cow-herds, who, by a very curious process, make a yellow paint. Each house has from five to fifteen head of cattle, male or female. During the six months following the middle of November, these cattle are allowed to pasture only half the day, are then tied up, and supplied with mango leaves to eat, which the people say does them no harm. In the morning the men watch, and collect what urine the cattle void, and procure 4 or 5 sers (each 2 lb.  $2\frac{1}{4}$  oz.) It is boiled until it becomes thick, cooled, and strained through a cloth: what remains on the strainer, is the paint, which is called Piyuri, and is made into little balls. Some say, that the urine gives  $\frac{1}{16}$  of its weight of the paint; others admit only of  $\frac{3}{16}$ , or even of  $\frac{1}{16}$ . Merchants make advances at the rate of 1 r. for from 1 to  $1\frac{1}{4}$  ser. Each house makes from 3 to 4 *mans* a year, which, when dear, is to the value of from 120 to 160 r.; and, when cheap, from 96 to 128 r.

The potters, both at Rajmahal and Mungger, make some wares of a fine quality, especially a kind of bottles for holding water (Sorahi), which, being porous, render it cool. Those of Rajmahal are uncommonly light, and very porous, so that they look neat, and produce a considerable coolness. At Mungger, they make two kinds of these bottles; both are black. The one kind is small, and exceedingly light; but it is smoothed on the outside, and does not allow the water to evaporate freely, so that it produces little coolness. The

other is coarser and heavier; but allows more free evaporation. These bottles exactly resemble in shape the black gullets (Kuzah) of Calcutta, well known to almost every one who has visited India, as being sent from Calcutta to all parts frequented by Europeans. A potter of Mungger, who makes these bottles, and also implements for smoking tobacco, says, that he does not make common pots. He makes his ware of a smooth black clay, which he finds near Chandi-than. It contains no sand nor pebbles. He forms the ware on the wheel, as usual. The larger kind of bottles, when formed, have applied to their surface some of the fine river sand, which contains much mica. The smaller kind has a substance called Gabi applied. This Gabi is a red clay, found near Sitakunda, which is mixed with water, and forms a pigment, which is applied by means of a cloth. It is smoothed by rubbing it with oil. After drying for some days, the vessels are put in a small kiln, with alternate layers of fire-wood, and covered like a charcoal-maker's kiln, with earth. When the workmen think that the vessels are sufficiently baked, the rents in the covering are repaired, and some oil-cake is put into the kiln, which occasions a prodigious smoke, and stains the vessels black, nor does the smoke affect the water which is kept in these vessels. He says, that the people of Rajmahal make the smaller kind only; but make them red, white, and black. The red are merely made of the clay, without any coating, or without being smoked. The white, before being burned, are washed with a pigment of Khari, or porcelain clay. The black are made in the same manner as here, and do not cool the water so well as either the white or red. The art has been lately introduced at Mungger.

The Baruyi, who sell betle, prepare in general the lime that is used with that substance. In Behar, stone-lime, or a kind of potash, prepared from the bark of the Asan tree, are most commonly used; and it is almost alone in the parts south from Rajmahal, that shells are collected for the purpose. The seven houses of lime-makers in that part of the country, collect and burn these shells. The others are employed to burn stone-lime, of which I have given an account among the natural productions. At present, the calcareous nodules called Ghanggat, are almost alone selected, and the two chief places where these are burned, are Bhagulpoor and Sakarigali. At

the latter place, on an abrupt bank of the river, just above high water mark, there is a horizontal bed of clay, among which the calcareous nodules are thickly impacted. In the floods, the workmen occasionally dig into this; but with fear, as the bank has occasionally fallen, and proved fatal. They therefore do not work at that season, unless when the demand is very urgent. When the floods subside, a great abundance of the nodules is always found lying among the sand, under the bank. These might no doubt be then collected to serve the burners throughout the year; but such an expense of capital as would be required for the hire of the collectors, is very seldom incurred by the artists of India. At Sakarigali it is said, that there are only five houses of lime burners; but these are in fact merchants who perform no part of the work, and hire the neighbouring peasantry, and people of the hill tribes, so that from 2 to 300 people, men, women, and children, are often employed. They have seven battas, or kilns, sunk into the ground, and their sides secured with well-kneaded clay. They are circular, about 10 feet deep, 8 in diameter at the bottom, and 12 at the top. At equal distances round are 4 holes, which descend on the outer side of the clay to the bottom, and there pass through this wall, into the cavity of the kiln, and give an abundant supply of air: but, although the kilns have been built on a sloping ground, it has not entered into the imagination of the natives to make a passage, through which the burned lime might be drawn from the bottom of the kiln. Of course a great deal of very disagreeable labour and time is employed in taking it up into baskets. Billets of wood and calcareous nodules are thrown intermixed into the kiln, and, when it is filled, the wood is set on fire, and allowed to burn without covering up; nor are the natives in this operation at all aware of the advantages of a smothered heat, which have been so well illustrated by Buffon, in his valuable treatise on heat. The expense of fuel is therefore great, although the kilns are surrounded by woods that are free for the workmen, and the operation is imperfect. The following is a statement of the expense attending the burning of each kiln. To digging the sand to render the nodules accessible, 40 days' labour, 2 r. 8 a.; to 250 days' labour of men, women, and children, at from 1½ to 4 pan of cowries, according to age and sex, employed to collect the

nodules, 9 r.; fire-wood furnished by contract with the hill people, 20 r.; 25 days' labour to remove and slake the lime, 1 r. 9 a.; 50 days' labour to separate the ill-burned pieces from the powder, 3 r. 2 a.; total, 36 r. 3 a. Each kiln gives from 4 to 500 *mans* (92 s. w. a ser), each weighing almost 94½ lbs., for which the merchant or burner is paid at the rate of 12 r. for the 100 *mans*. The average value of the lime of each kiln is 54 r. leaving a profit of 17 r. 13 a., or in the medium of years about 80 r. a year for each kiln. Out of this the merchants have to pay 10 r. for rent. None is ever made without the whole price having been previously advanced, and the burners very seldom fully complete their engagements, or are able to refund the balance. At Bhagulpoor, are 15 houses of lime-burners, but on a much smaller scale, as they are the actual labourers, and do not hire in assistants.

Stone cutters are here more numerous than in the districts formerly surveyed; because there are several quarries. In the account of the natural productions, I have mentioned these quarries, and have given some account of the imperfect manner in which they are wrought. The workmen very seldom give themselves the trouble to split the entire rock. As much as possible they endeavour to find among detached masses those of a size that will suit their purpose; and, where these cannot be had, they take advantage of natural fissures in the more decayed parts of the rock, and remove masses by means of iron crows. Their operations are now entirely confined to hornblende, or indurated potstone, and to milstones: but traces remain to show, that granite has been formerly wrought, and the blocks have been separated by wedges, exactly as I have described in my account of Mysore. The present workmen could cut granite square with the chisel; but they are totally unable to give it a marble polish; nor could I procure one, that could do this even to calcareous marble. They only attempt to polish the hornblende, and this does not take a finer surface than that of a writing slate. The workmen of Bhagulpoor have for some years been chiefly employed in the Jain temple of Champanagar. Those of Ratnagunj make only stones for hand-mills. Those of Mallepoor chiefly quarry milstones and hornstone, and form these materials into rude blocks, which are afterwards finished at Mungger. Plates, cups, mortars, and weights are made,

for common sale, of the hornblende, or hornblende slate, and images of Siva, when commissioned, are made of the former. The workmanship of these images is fortunately so rude, that they convey very little idea of the indecencies which they are intended to represent. The cups and plates are heavy, and are not turned in the lathe; but they are cut with an exactness, that is surprising, and which I should have thought impracticable except by turning: and I have no doubt, that these workmen are capable of executing with great neatness any design that could be given to them.

The white aggregate rock of Laheta is made into the stones of hand-mills, and those for rubbing sandal and curry stuff. Two of the houses at Mungger are rich, having a stock of about 1000 rupees. In general the stone cutters make good wages; and, when they have no employment in making new goods, they are sure of finding work by going round to pick the old mill-stones that have become too smooth.

The small number of goldsmiths that is to be found in most parts of the district, will show the small extent that has been made in the luxury, to which the women of India are most addicted, that is, the having many ornaments of gold and silver. In Mungger, however, the number of workmen is great, and the brides, from far and near, go there to be equipped. Some of them are exceedingly neat workmen, and make plate almost as neatly as could be done in Calcutta. These make very high wages, 8 anas a day; but many in the district do not get above  $\frac{1}{2}$  of that sum. None of them have any capital, nor make goods for sale; as no native would trust bullion in their hands, nor to their making it up without adulteration.

Very few vessels of copper, brass, or bell metal are made in this district, and the workmen are chiefly employed to mend those imported from Moorshedabad, and to make female ornaments. In some places these two professions are considered as distinct, the makers or menders of vessels being called Kasera, and the makers of ornaments being called Thahtera; but in others the terms are used as synonymous. All here are poor.

The Rangdhaluyas or Ranggarhuyas work in tin and pewter (Justah), making ornaments for women, and tin leaf. A man takes one ser of tin worth 1 r.;  $\frac{1}{2}$  ser of lead worth 4 anas;  $\frac{2}{4}$  anas worth of oil, which is put on the metals, while



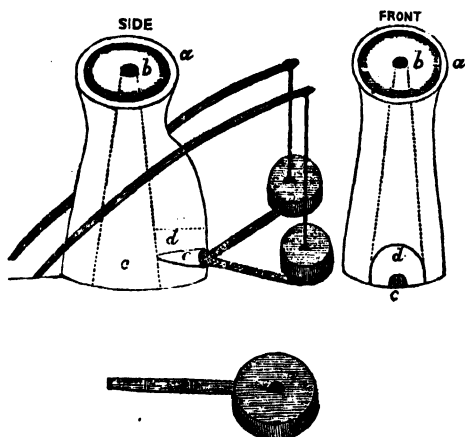
in fusion, to prevent calcination;  $2\frac{1}{2}$  gandas worth of borax, used in soldering; and requires 4 anas worth of charcoal: the whole cost is therefore 1 r. 5 anas,  $7\frac{1}{2}$  gs. He procures  $1\frac{1}{8}$  ser of pewter; for which the natives here have no appropriate name. In five days a man makes this quantity into rings, bracelets and other ornaments, and his wife sells the work for 2 rs.

I have already had occasion to notice, that in some parts of the district the profession of blacksmith and carpenter are united in the same persons. In other parts again they are separated, and I have mentioned that those of both classes who are employed in making the implements of agriculture are usually paid for their labour in grain, and are often entitled to a certain share of the crop, forming a regular part of the establishment on each estate. From among those who labour at the anvil alone, I must notice two classes who do not belong to the manorial establishment; one of them in the forests forges the crude iron, as it comes from the smelters; the other in towns, make the finer kinds of goods. Before proceeding to mention these, however, I must give an account of those who smelt the iron, who in general, however, work part of the year in cultivating the ground.

In my account of the natural productions, I have mentioned the very imperfect skill which the people of this district have in working their mines of iron; and the defects in the manipulation necessary to fit the ore for the furnace. The heat of the furnace is so trifling, that it cannot vitrify the stony particles of the ore, which consequently must be reduced to a coarse powder to separate these particles by winnowing. Having no means of performing this operation, except by beating the ore with a stick, wherever it is found in solid masses, it is considered as useless. The same people mine, prepare charcoal, and smelt, so that no estimate can be formed of the expence of the different parts of the process; and, being very ignorant timid creatures, very little reliance can be placed on the accuracy of such information as they gave; nor can we form any judgment concerning the nature or richness of the ore from their operations, as they never have weighed nor measured either the ore that goes to the furnace or the masses of crude iron that come from it.

The furnace consists entirely of kneaded clay, and is about

3½ feet high. The upper extremity (see annexed drawing) is round, and about 18 inches in diameter. It is slightly



concave, and in its centre is a hole (*b*) about 2 inches wide, which descends gradually, widening to the ground (*c*), where it may be from 9 inches to a foot in diameter. Under the top the furnace contracts a little, and then it swells out like a bottle; but very little only towards the back and sides, and a good deal towards the front, in the bottom of which there is a semicircular opening (*d*) which communicates with the inner cavity of the furnace (*b, c*). In this opening is laid a pipe of baked clay (*e*), which receives the muzzles of the bellows; and, when going to work, the opening round the pipe is covered with kneaded clay. Some charcoal is put in the furnace, and having been kindled, the bellows are applied. The cavity on the top of the furnace is then covered with charcoal, and as this kindles, some of the prepared ore is thrown on it, and thrust into the hole, as the fuel below is consumed. This is repeated until the whole ore intended for the smelting has fallen through the aperture; and the fire is kept up until the workmen judge that the operation is complete. The clay and pipe are then removed from the front of the furnace, the mass of iron is taken out, while yet hot is cut in two, and is then cooled in mud, a good deal of which penetrates its pores, and adds to the weight. In this state it is always sold. Some of the smelters allege, that in each furnace they always add a quantity of iron dross, that is

procured in forging the crude iron ; while others allege, that they use ore alone ; and I have heard it asserted, that the best iron is made entirely by smelting this dross, without any addition of new ore ; while finally some of the forgers assured me that the dross was totally useless. I cannot take upon myself to reconcile such discordances ; but I saw some iron smelted, in which the dross was added, some in which the ore alone was used ; and near some of the forging furnaces I saw lying a quantity of the dross, which no one, I was told, thought it worth his while to remove. The bellows are the most ingenious part of the apparatus. Each consists of a cylinder of wood, about 18 inches in diameter, and 6 inches high. This is hollowed, so as to leave thin edges, and a thin bottom. The top is covered with a hide, tied firmly round the mouth of the wooden vessel ; but the skin is not tight like a drum ; on the contrary it may be drawn up or pushed down to a considerable extent. In its centre is a hole about an inch in diameter, through which is passed a wooden button, that holds a string tied to the end of a bamboo, fixed like the spring of a turner's lathe. When at rest, the spring raises the skin, so that its upper surface is a hemisphere. The muzzle of the bellows a bamboo, about 4 feet long, which passes through a hole in the side of the wooden cylinder. Two of these bellows are placed close to each other. The workman, who is to blow with them, puts his heel first on the hole in one skin, and depresses it, expelling the wind by the muzzle ; he then puts his other heel on the other hole, and thus, treading alternately on the two cylinders, expels the wind, while the spring raises the hide, when he lifts one of his feet to throw the whole of his weight on the other. When it is wanted to increase the power, another workman stands behind, and both tread at the same time. This gives as much wind as the bellows of one of our blacksmith's forges, but with a very severe labour. During this operation the mass of metal would not appear to be ever melted, it is only so far softened, that the particles cohere in a slaggy porous mass.

In Bangka, where 150 of the smelters reside, it was alleged by themselves, that they only smelted five months in the year, and that they wrought in their farms, and in collecting Mahuya flowers for the remainder, except during the two

months of marriage feasts, when very little work is done in that part of the country. Other people however said, that on an average they wrought 20 days a month, throughout the year, and on an average a family, of one man, his wife, and a boy or girl able to assist in collecting ore, can smelt twice a day, procuring daily about 5 sers of 36 paysas or 72 s. w. ( $9\frac{1}{2}$  lbs. or more exactly  $9\frac{24}{100}$ ) of iron, which they exchange usually for  $7\frac{1}{2}$  sers (80 s. w., or  $15\frac{4}{10}$  lbs.) of rice, but when I visited the place, they procured only 5 sers of that grain. As they are most notorious drunkards, although in other respects they live very poorly, we cannot allow that they make less. Each family therefore makes in the year about 30 *mans* of crude iron, or in all 4500 *mans* (about 2970 cwt.), and 2000 *mans* (about 1170 cwt.) of forged iron (64 s. w. a ser) are said to be exported, which confirms the above calculation. Twenty-five traders advance grain to these smelters (Kol), and sell this crude iron, called Bhinda, to the forgers at from 1 to  $1\frac{1}{2}$  r. a *man* (the ser 64 s. w.) equal to nearly  $65\frac{7}{10}$  lbs. The accounts in Tarapoor did not differ very materially, and there being in that district 100 families, they will make annually about 3000 *mans* of crude iron. In Lakardewani the smelters only allowed 12 *mans* of iron for each family; but little reliance can be placed on what they said; nor can it be conceived that they make less than their neighbours; so that, there being 70 houses, the crude iron annually made will be 2100 *mans*. In the whole district we must therefore allow the annual produce of crude iron to be 9600 *mans* or 6336 cwt. A family can make about  $2\frac{3}{4}$  rs. a month, and cultivate 4 or 5 bigahs of high land. Each pays from 1 to  $1\frac{1}{4}$  r. as rent for ore and charcoal, and about 12 anas for the fields, which are generally cultivated for a few years, and then fallowed, as the smelters often move in search of ore.

The iron of Kharakpoor is reckoned the best that comes to Mungger; and greatly superior to that of Virbhum, or Ramgar. It is forged into various forms. That intended for plough shares (Phal) is the highest priced, selling at Mungger for about 6 sers (84 s. w.) almost 13 lbs. for the rupee. It comes nearly fitted for putting in the plough. That intended to be wrought again is in larger masses, capable each of making a hoe, hatchet, or some other instrument, from whence it derives various names, and sells at about 8 sers or  $17\frac{1}{2}$  lbs.

for the rupee. In working into coarse goods it loses one-third, and wrought into fine goods it loses one-half.

Some blacksmiths do nothing else but forge the crude iron, while others employ part of their time in making the implements of agriculture, and coarse utensils used in the country. They all reside near the mines, and the crude iron is never sent to a distance for market. Five or six men are employed at each forge (Maruya), which does not differ much from a common Indian blacksmith's; nor is it requisite to strike the iron with a larger hammer than that which an European blacksmith's assistant commonly wields, weighing perhaps four or five pounds. The crude iron is heated and hammered three or four times, and is then fit for sale, being formed into little wedges, bars, or plates, according to the various purposes for which it is intended. Each man, it was said, could make two anas a day; but they would give me no estimate of the quantity of forged iron procured from a given quantity of crude iron, on which I could place reliance. In some places they stated, that the forged iron was  $\frac{3}{5}$  of the crude, in others  $\frac{1}{4}$ , and there is no doubt that the loss is very great, as I evidently saw during the operation, but the above mentioned loss is certainly exaggerated. The statement, on which I can most depend, was procured at Bangka. A forge, with six men, makes daily 10 sers (64 s. w. =  $1\frac{64}{1000}$  lb.) of each three kinds of iron; one fitted for plough-shares, one for hoes, and one for hatchets. Ninety sers of crude iron worth 3 rs. give 40 sers of the forged worth, at the advance price,  $4\frac{1}{2}$  rs.; and to forge this quantity requires  $7\frac{1}{2}$  anas worth of charcoal. Each man therefore makes 2 anas  $1\frac{1}{4}$  ganda a day. The  $\frac{1}{4}$  ganda may be allowed for the expence of implements, &c. They never work but when they receive advances. Merchants usually sell them the crude iron, and purchase the forged, so soon as made.

The blacksmiths who are employed in making finer goods, in general work for the use of the natives, making spears, swords, matchlocks, and a rude kind of cutlery. Some of them however at Bhagulpoor and Tarapoor are good workmen, and capable of making anything, for which there is a demand. At Mungger are about 40 houses of blacksmiths, who chiefly make goods after the European fashion, very coarse indeed when compared with English work, but cheap

and useful. The following is a list of the articles made, with the most common rates of their value :\*

Double-barrel guns, 32rs.; rifles, 30rs.; single-barrel fowling pieces, 18rs.; muskets (Atmanari), 8rs.; Krabin (blunderbuss), 25rs.; ordinary match-lock pieces, 4rs.; carved ditto, 6rs.; pistols single-barrel, 10rs.; ditto double-barrel, 20 rs.; tea-kettles (Mug) 12 anas; ditto (Sada) 8 anas; \*fish-kettles, 30in. long, and 18in. wide and deep, 45; \*iron ovens, 16rs.; sauce-pans, from  $\frac{1}{2}$  to 3rs.; frying-pans, from 1 to 3rs.; snuffers, from  $\frac{1}{2}$  to 3rs.; \*iron cullenders, 2rs.; chafing irons, square (Chauka Anggethi), 6rs.; ditto, round (Gol Anggethi), 2rs.; ditto, high (Ukhriwala Anggethi), 6rs. 16 anas; \*chamber stoves (Dhungya kush), or grates, 125 rs.; kitchen stoves (Drajwala Anggethi) 15rs.; ladles, from  $\frac{1}{2}$  to 2 $\frac{1}{2}$  anas; ramrods, from  $\frac{1}{2}$  to 1r.; swords, from 1 to 3rs.; spears, from  $\frac{1}{2}$  to 2 rs. 8 anas; table knives and forks, per doz. 6rs.; breakfast ditto, ditto, 4rs.; scissors, 4 anas; Sarota or beetle-nut cutters, 2 to 6 anas; Hindustani bits for bridles, 4 anas; ditto stirrup-irons, 6 anas; horse shoes and hob nails, per ser, 6 anas 8 pice; Hindustani spurs, per pair, 12 anas; small hatchet (Tanggari), 1r.; hatchets (Kurali),  $\frac{1}{2}$  to 1r.; hoes, 12 anas; \*padlocks, chest locks and door locks,  $\frac{1}{2}$  to 1r.; \*hinges,  $\frac{1}{2}$  to 5rs.; clamps for boat building, per ser, 5 1-3 anas; nails for clinker-built boats, per ser, 5 1-3 anas; nails, common, do. 5 1-3 anas; curry-combs (Kharara), 2 to 4 anas; sickles, without teeth (Hangsuya), 1 $\frac{1}{2}$  to 3 anas; shovels for cutting grass roots for horses, 2 to 4 anas; large sickles for cutting grass, 4 anas; sickles, with teeth, 1 ana; \*palanquin and cast furniture; cork-screws, 4 to 8 anas; razors, 4 anas; tongs, 1 to 2 anas; rod for cleaning the implement used in smoking,  $\frac{1}{2}$  ana; coarse needles, per 100, 3 anas; Takuya or wheel spindles, per 100, 1 r-8 anas.†

The chief articles are the different kinds of fire-arms, mostly sold to passengers, and carried towards the west; and tea-kettles and chafing dishes sent to Calcutta. In each shop are two or three men, generally partners or persons of the same family. When any man gets a large commission, he hires in his neighbours. A common labourer gets 2 anas a day, a clever workman is allowed 3. The barrels of the fire-arms are made by twisting a rod round an iron spindle, and then hammering it together. The bore is afterwards polished and enlarged by borers of different sizes. The tea-kettles are made in sundry pieces united by solder, which is a loss, as the solder being copper is dangerous; and they ought therefore to be tinned when used. The workmen have adopted the European bellows. These improvements were

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† Those marked thus \* are only made when bespoken.

introduced by the Europeans of the regiments formerly in garrison.

At Mungger is a house of Koftgurs, who plate iron tea kettles, and inlay gun barrels, sword blades or spears with gold or silver. At Bhagulpoor are two houses of needle makers, who live entirely by this profession. They have not yet acquired the art of forming the eye after the European manner; but merely make a hole through the thick end, so that the thread passes with difficulty through the cloth.

*Cloth Manufacture.*—All castes are here permitted to spin, and near the Ganges, everywhere except in Rajmahal, it was stated, that a large proportion of the women spin cotton, some all day but most only for a part; and this is an employment suited well to the jealousy of the men. In Rajmahal, owing probably to dissipation, and in the forests owing to rudeness, the women spin very little. The whole spun is very coarse, and is done by means of the small wheel. The number of women on the whole was estimated at about 160,000. But by taking an average of the various reports of the quantity of cotton required, of the thread spun, and of the value of each, it would appear that every woman, one with another, spins annually 16 sers  $12\frac{1}{2}$  Chhs. of cotton wool (34 lbs.  $7\frac{1}{2}$  oz.), worth 6 rs.  $9\frac{1}{4}$  anas, and makes thread to the value of 11 rs.  $1\frac{1}{2}$  ana, having a profit of 4 rs.  $8\frac{1}{4}$  anas. Women who spin constantly of course make more, and many, who are much otherwise employed, make less. This statement, so far as it relates to the quantity and profit belonging to each woman, seems pretty accurate; but the total number of women said to spin, can by no means be reconciled with the quantity of raw materials said to be used. It was said, the cotton wool imported amounts annually to about the value of 276,000 rs. which sold by retail, and fitted for spinning, will amount to 345,000 rs.; and what grows in the country, including that reared on the hills, may be about the value by retail of 125,000 rs. These, according to the above calculation, would only employ 71,450 women, who would make thread to the value of about 792,600 rs. About 198,000 rs. worth of this will be required for mixed cloth, carpets, sewing, &c., the remainder, according to the average of estimates received, would make about 832,000 rs. of cloth.

The dyers in most parts of the district are chiefly employed

to dye the clothes of those who attend marriage parties, that are exceedingly numerous; and during the three months which the ceremonies last, the dyers make very high wages; but at other times they have little employment. They dye chiefly with the safflower, with which they give two colours, Kusami a bright pomegranate red, and Golabi a pale but fine red like the rose; and each colour is of two different shades. They also dye with indigo, but blue is not in much demand; and with the flowers of the Tungd and Singgarhar. As the dying cotton with safflower, and the other flowers is much practised at Mungger, I shall give an account of the processes as they were performed before me. The safflower, *Carthamus tinctorius* or Kusam, is in most demand.

In order to dye the pomegranate red (Sorukh or Kusami), for three turbans 40 cubits long by 1 wide, take of the flowers 3 sers (84 s. w.) or 6 lbs. 7½ oz. value 1 r.; of impure carbonate of soda (Saji), 6 Chhataks, almost 13 oz., value ½ ana; of turmeric 1 Chhatak, 2½ oz., value ¾ ana; of any vegetable acid, lime juice, mango, or tamarind, to the value of ¾ ana. Wash the flowers on a cloth strainer with six pots of water, each containing about 15 sers (32 lbs. 5½ oz.), until the water comes off clear. This water is called Pili, and is used in dying green with turmeric and indigo. In about an hour after, wash the same flowers with another six pots of water. This water is called Dohol, and is of no use. Then squeeze the water from the flowers, add the soda, and rub them together. Then place them on the strainer, and with 1 or 1½ pot of water wash out the colour, which is called Sahab, and is the proper dye. In this dip the three turbans, and knead them in the dye. Then take out the cloth, and add the turmeric and acid; then put in the cloth again, and having soaked it, wring, and dry it in the shade. The same operation is repeated with fresh flowers, on the two following days. If the colour is wanted lighter, a little more water is added to the Sahab; and if a bad cheap colour is wanted, give the cloth only one or two dips instead of three.

The best Golabi or rose colour is given thus. After having extracted the Sahab colour as above, the dyer adds to the same flowers another pot of water, which extracts a colour called Pachuya, that dyes four turbans of the same size. They are first dipped in the dye, then taken out and



an acid added, and then dipped again and dried in the sun. Each turban brings to the dyer 2 anas, and the acid costs  $\frac{3}{4}$ . A paler rose colour is given by taking  $\frac{1}{4}$  ser of the Sahab colour, adding 5 sers of water, and using this dye as the other. The dying three turbans of a bright pomegranate brings the dyer 4 r. 8 a., and the four turbans of a rose colour brings 8 anas, in all 5 r. The cost is 3 r.  $6\frac{3}{4}$ .

Naranggi, or orange colour, and Zurd, or yellow, may be given either with the flowers of the Singgarhar or of the Tungd, both nearly of the same quality, and used in the same manner; but each turban requires 4 chhataks ( $8\frac{2}{3}$  oz.) of the former, while 6 chhataks (13 oz.) of the latter are necessary. The flowers are boiled in 3 sers (each 2lb.  $2\frac{1}{2}$  oz.) of water to 2 sers. When cooled, add  $1\frac{1}{2}$  ser of the Sahab colour, prepared as above from Safflower, and 1 ser of water. In this dip the cloth, wring it, add some vegetable acid, and soak the turban in the mixture for 24 minutes; then wring and dry it in the shade. This makes an orange of different shades according to the quantity of cold water added. Each turban pays for dying 4 anas. The yellow colour is given in the same manner, only that no Sahab is added, and that in place of acid 1 chhatak of alum, worth  $\frac{1}{2}$  ana, is employed. The flowers are boiled with 4 sers of water to 3 sers. If a light yellow is wanted, a little cold water is added to the dye when cool.

The dyers of Bhagulpoor partly give the same colours; but about 12 houses are constantly employed in dying the mixed cloth made of cotton and Tasar silk, which is woven in the vicinity of that town. These dyers give a colour to pieces that are of an uniform colour (*Baftahs*), and that are dyed after having been woven. I saw 10 colours dyed by the following processes.\*

1st. Kakreja, a dark brown inclining to purple. Take 25 s.w. Tairi (pods of the *Cæsalpinia*), bruise and infuse it in 5 sers of water for 4 ghuris. Then strain off the water and soak the cloth in it. Then dissolve  $3\frac{1}{4}$  s.w. of Kusi (a sulphate of iron become white and powdery by exposure to air) in 5 sers of water, and put the cloth in it a few minutes; wring,

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\* The Indian dyes are excellent and permanent.—[Ed.]

and dry it in the sun. Then dissolve  $3\frac{1}{2}$  s.w. of alum in a little hot water, add it to 5 sers of cold, and in this soak the cloth. Then boil  $12\frac{1}{2}$  s.w. of Sappan wood in 15 sers of water for six hours, cool the decoction and soak the cloth in it for one ghari. Then wring, and add to the same colour  $6\frac{1}{2}$  s.w. of lime, stir this about, and put in the cloth again. Then wring and dry in the shade.

2nd. Agari, a brown without any tinge of purple. Take 50 s.w. of bruised Tairi; infuse in 5 sers of water for about 3 gharis, soak the cloth in the infusion, and wring and dry it in the sun. Dissolve  $6\frac{1}{2}$  s.w. of Kuis in 5 sers of water, and rub the cloth in the solution for about 1 ghari. Then infuse  $18\frac{3}{4}$  s.w. of terra japonica (*Kath*) in 5 sers of cold water, add a little lime water, and stir the infusion. Then dip into it the cloth, wring, and dry it in the sun.

3rd. Uda, a bright purplish brown. Infuse 25 s.w. of Tairi in 5 sers of water, and soak in it the cloth, wring it, and dry in the sun. Dissolve  $6\frac{1}{2}$  s.w. of Kuis, and use it as in the former operations. Then soak the cloth in the solution of alum, such as first used in the first operation. Then soak it for one ghari in a decoction of 50 s.w. of Sappan wood, boiled for 15 gharis in 20 sers of water, which will be reduced to 14 sers. Afterwards to a part of the decoction add a little lime water, put in this the cloth, and dry it in the shade.

4th. The Baygani, a colour rather lighter than the above, approaching to Claret colour. Soak the cloth in the infusion of Tairi, as above. Then put it in a solution of Kuis, and dry it in the shade. Then soak it in a solution of alum, to which some lime has been added. Then boil  $12\frac{1}{2}$  s.w. of Sappan wood in 5 sers of water for six hours; when cool, soak the cloth in the decoction, and wring; then add a little lime to the same decoction, put the cloth in this, wring and dry in the shade. If the colour is not full, put it again into the decoction of Sappan.

5th. Habasī, a blood red. Soak the cloth, as before, in the infusion of Tairi, and put it in a solution of  $6\frac{1}{2}$  s.w. of alum. Then boil 25 s.w. of Sappan wood for 15 gharis, in 10 sers of water. Cool the decoction and add 25 s.w. of lime water. In this put the cloth, wring, and dry it in the shade.

6th. Shotari, a light brownish drab colour. Take  $12\frac{1}{2}$  s. w.

of terra japonica, and infuse it a whole day in  $\frac{1}{2}$  ser water. Next day add 4 sers of water and soak in it the cloth. Then put this in a solution of  $6\frac{1}{2}$  s.w. of Kusis in 5 sers of water. Then wring and dry in the sun.

7th. Torunji, a bright gamboge yellow. Infuse  $12\frac{1}{2}$  s.w. of turmeric in 5 sers of cold water, and strain the infusion. Put in this the cloth. Then put it in a solution of  $6\frac{1}{2}$  s.w. of alum in 5 sers of water, to which has been added 50 s.w. of sour curdled milk. Then dry the cloth in the shade.

8th. Asmani, a light sky blue. Take  $3\frac{1}{2}$  s.w. of native indigo infused in 5 sers water, and soak in it the cloth, rubbing it well. Then add to the indigo water  $3\frac{1}{2}$  s.w. of alum dissolved in a little water, and 25 s.w. of milk, and rub the cloth again in the mixture. Wring and dry it in the sun.

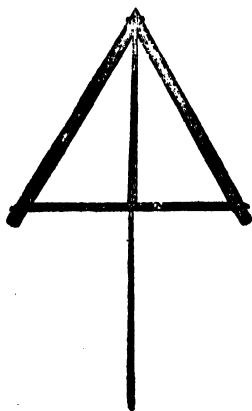
9th. Fakhtah, a bluish ash colour. Put the cloth in an infusion of 50 s.w. of Tairi in 5 sers. of water. Then in a solution of  $6\frac{1}{2}$  s.w. of Kusis in 5 sers of water. Dry in the sun, and take  $6\frac{1}{2}$  s.w. of Kachur root (a scitamineous plant mentioned in my account of Puraniya) powdered, and infuse it in 5 sers of water. Put the cloth into this, and dry in the sun.

10th. Shishaha, a pale blue compared to lead, but very different. Proceed as in dying Fakhtah, but the cloth, after being taken from the infusion of Kachur, is put into an infusion of  $12\frac{1}{2}$  s.w. of country indigo in 5 sers of water, and dried in the sun. It may be also made by omitting the Kachur infusion. In the whole of these processes the dyers use well water alone, and most of that near Bhagulpoor is hard. The sicca weight is rather more than  $179\frac{1}{2}$  grain apothecaries weight; and the ser contains 100 sicca weight, or 2lb. 9oz. avoirdupois weight.  $2\frac{1}{2}$  gharis are equal to 1 European hour.

Of the weavers who work in Tasar silk, a few weave cloth entirely of that material, but the quantity is so trifling that I shall take no farther notice of it, and confine myself to detail the accounts of the mixed cloth called Bhagulpuri, because almost the whole of it is woven in the vicinity of that town; for out of 3275 looms, stated to be in the district, 3000 of these were said to be in the Kotwali division. The women of the weavers mostly wind the thread, although the men sometimes assist. These people are so timid, that no great reliance can be placed on what they say; but I shall mention

what was stated by two men that came to me at Mungger from Bhagulpoor.

A woman takes five *pans* of Cocoons (405), and puts them in a large earthen pot with 600 sicca weight of water, a small mat being placed in the bottom to prevent the cocoons from being burned. A small quantity of pot ash, tied in a bit of cloth, is put into the pot, along with the cocoons, which are boiled for about an European hour. They are then cooled, the water is changed, and they are again boiled. The water is poured off, and the cocoons are put into another pot, where they stand three days in the sun covered with a cloth to exclude insects. On the 4th day they are again boiled, with 200 sicca weight of water, for rather less than an hour, and then poured into a basket, where they are allowed to cool, after which they are washed in cold water, and placed, to dry on a layer of cow-dung ashes, where they remain spread, and covered with a cloth, for six hours. The woman then picks out such cocoons, as are not quite ready for winding, and exposes them for a day or two to the sun, which completes the operation. The outer filaments of the cocoon are then picked off, and form a substance called Jhuri, of which the potters make brushes used for applying a pigment to their vessels. The fibres from 4 or 5 cocóons are then wound off on a miserable conical reel (see annexed drawing), which is twirled



round by one hand, while the thread is twisted on the thigh, the cocoons adjusted. and the broken fibres joined by the other. The cocoons, while winding, are not placed in water.

This thread is called Lak, and after the Lak has been removed, there remains another inferior kind of filament, called also Jhuri, which is wound off, and is purchased by those, who knit strings. Even the cocoons, that have been burst by the moth, are wound off; but owing to the frequent joinings give a weaker silk. When the Tasar is neither very high nor very low, that is, when 405 cocoons cost a rupee at Bhagulpoor, a woman boils and winds this number in 10 days. She will obtain from 16 to 18 Paysa weight ( $58=100$  sicca weight) of the good thread, which sells at  $9\frac{1}{2}$  Paysas for the rupee. She gets besides  $2\frac{1}{2}$  Paysas weight of the inner bad thread called Jhuri, which sells for  $\frac{1}{2}$  ana. In a month, therefore she might wind 1215 cocoons, worth 3 Rs. and would procure about 51 Paysa weight (lb.  $2\frac{257}{1000}$ ) of fine thread worth 5 rs. 6 as. and  $1\frac{1}{2}$  ana worth of refuse (Jhuri), so that her profit would be 2 rs.  $7\frac{1}{2}$  as. a month, but pots, fire-wood, and unavoidable interruptions necessarily make some reductions; and my informants say, that the women in fact make only from  $1\frac{1}{2}$  to  $1\frac{3}{4}$  rs. a month. It is only however, when the cocoons are about a medium price, that they have this great advantage. When the raw material is too cheap, it is not saleable; when scarce, all cannot procure work. The estimate is also made on the supposition, that one half of the cocoons wound is of the kind called Dhaba; and the remainder of the kind called Sarihan; the former winds easily, but sells cheap, being coarse; the latter is wound with difficulty, but the finest goods are woven of it alone. Setting aside the refuse as a trifle, every rupee worth of the raw material, when the price is reasonable, will give 17-9 $\frac{1}{2}$  rs. worth of thread or 100 will give nearly 179, or the spinner has 79 per cent. for her trouble. The medium price of the 2 kinds of thread, at  $9\frac{1}{2}$  Paysas for the rupee, will be for the pound avoirdupois about 2rs. 6 as.

The kinds of cloth, most usually made, are as follows:—

1st. Duriyas, the warp consists of three parts of cotton, and two parts of Tasar of different colours. The woof is all cotton of one colour, so that the cloth is striped lengthways, and is dyed entirely by the weavers in the thread. The pieces are most usually from 20 to 22 cubits long by  $1\frac{1}{2}$  broad, and on an average sell at 42 anas. The cotton thread costs

22 anas, the tasar  $10\frac{1}{2}$  anas. A man can weave monthly  $7\frac{1}{2}$  pieces.

2nd. Namunahs are pieces from 20<sup>6</sup> to 22 cubits long and  $1\frac{1}{4}$  broad; the most common price is 44 anas. The warp contains about 35 parts of cotton thread, and 21 of tasar, disposed in stripes of a different pattern from those of the Duriya. The woof is all cotton. The cotton costs 21 anas, the tasar 14 anas. The dying is done by the weaver, the drugs costing one ana. The loom makes seven pieces a month.

3rd. Chaharkhanahs. The pieces are about 18 cubits long, and  $\frac{2}{3}$  of a cubit wide. The average value is  $2\frac{1}{2}$  rs. Each loom weaves  $6\frac{1}{2}$  pieces in the month. The warp requires 10 parts of cotton, and 15 parts of tasar; the woof 10 parts of cotton and 18 parts of tasar, so that the pieces are checkered. The cotton thread is worth 6 anas, the tasar 1r. 6as. The dying costs 4 anas.

4th. Baftahs are pieces of an uniform colour, dyed after being woven. The pieces are of the same size with the Namunahs. All the warp is Tasar, the woof is cotton. The former costs 18 anas, the latter 20 anas; the dying and washing cost from 3 to 5 rs. for 20 pieces, or on an average 3 anas. The common price of the pieces is about 3 rs. (from  $2\frac{1}{2}$  to 5 rs.) In the month a loom weaves  $6\frac{1}{2}$  pieces. The foregoing kinds are mostly made for exportation; the following is mostly made for country use:—

5th. Khariasri are pieces 12 cubits long, and 2 cubits broad. They differ in size and fineness from the Duriyas. The Tasar costs 6 anas, the cotton  $7\frac{1}{2}$  anas; the pieces on an average worth  $1\frac{1}{8}$  rs. and a man weaves eight pieces a month. The weaver dyes this kind.

Several other kinds are made; but these are the most important, and their consideration is quite sufficient for the purposes of general estimates. About  $\frac{1}{3}$  of the weavers are employed in weaving the Kharisaris; and it is said, that of every 1000 of the finer kinds 500 are Duriyas, 350 Namunahs, 100 Chaharkhanahs, and 50 Baftahs. Allowing that 2000 looms are employed on the finer goods, and that each works a proportion of the different kinds as above mentioned, each will weave to the value of rather more than 19 rs. a month. But 1000 pieces, at the above rates, will amount in value to 2600 rs. and the expense will be as follows:—

	Tasar.		Cotton.		Dying.		
	R.	A.	R.	A.	R.	A.	
350 Namunahs . . .	306	4	459	6	21	14	
50 Baftahs . . . .	56	4	62	8	10	0	
100 Chaharkhanahs	137	8	37	8	25	0	
500 Duriyas . . . .	78	2	687	8	15	10	
	578	2	1246	14	72	8	Total 1897½.

But, allowing for trifles, we may take the expense at 1900 rs. leaving 700 rs. for the weavers. At this rate, on 19 rs. worth woven monthly, he has 5 rs. 1 a. 16½ gs. for his trouble, but he works only nine months in the year, passing the three hot months of spring in marriage festivals, so that the annual gain of each man will be about 46 rs. besides what his women make; but many men, who have two or more looms, hire journeymen to work, and they themselves spin and dye. Journeymen make about 2½ rs. a month; but in procuring a support are greatly assisted by the spinning of their women. Now 2000 looms working nine months in the year at 19 rs. a month, will give the total value 3,42,000 rs. but it was alleged, that only 2,00,000 rs. worth are exported. Two Moguls make advances to about the value of 1,00,000 rs. mostly Duriyas and Namunahs, to be sent to the west of India. The commercial resident at Maldeh advances about 10,000 rs. mostly for Baftahs and Namunahs, and about 90,000 rs. worth are sent by different smaller traders to Calcutta. As usual however in this district the merchants are very cautious in discovering the extent of their trade, and I have no doubt, that the above quantity is woven, and almost entirely exported. The raw materials required will be 49700 rs. worth of Tasar thread, and of cotton 1,63,600 rs.

Again a weaver, making coarse goods for country use, weaves monthly eight pieces, value 13 rs. Expense, (Tasar silk 3 rs.; Cotton thread 3 rs. 12 as.) 6 rs. 12 as.—Profit 6 rs. 4 as. But many of the weavers work some of the fine, and some of the coarse; I have only separated them for the sake of calculation. At this rate 1000 looms will weave in nine months 117,000 rs. worth. The value of the raw silk will be 27,000 rs. and of cotton thread 33,750 rs.

The weavers of cotton cloth in this district were stated to

be 6212 houses, having 7279 looms.\* Taking the average amount which they gave of their work and profit, it was stated that the raw material came to  $\frac{1}{5}$  of the whole value of the cloth, which, so far as I can judge, may be the case. The weavers, however, pretended to a most extraordinary inactivity; and as they are the musicians employed on almost every occasion, and especially at the tumultuous marriages of this district, I cannot assert that they work more than ten months in the year. The average value of their work was stated at 7 rupees worth of cloth monthly, or 70 rupees a year for each loom, which would only give them 20 rupees for a subsistence, and their women are employed in warping, so that they bring in little or no addition. While employed in festivals they get little more than food, and what will keep their instruments in repair; we may safely therefore reject this calculation, for they in general cannot spend less than from  $2\frac{1}{2}$  to 3 rupees a month. In a good many divisions, indeed, it was admitted that each loom wove to the value of from 8 to 10 rupees a month, while in others they were not ashamed to reduce the whole value of the cloth woven in a month to 4 rupees. I have before estimated that the quantity of cotton yarn disposable for this manufacture is at least worth 5,94,600 rupees; and the thread being  $\frac{1}{5}$  of the value of the cloth, this will amount to 8,32,440 rupees, which will give about 114 rupees worth for each loom in the year, or not quite  $11\frac{1}{2}$  rupees a month for the ten months of labour. The profit will be about 32 rupees a year for the labour of each man and his wife. Although I have allowed 1,20,000 rupees worth of mixed Tasar cloth to be used in the district, although a little (50,000 rupees) is imported, and although the people are very scantily covered both by night and day, yet the above quantity is so small that it will not suffer the smallest diminution; and it is probable that the quantity of cotton imported and number of weavers has been concealed, especially considering the number of women supposed to spin.

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\* The introduction of steam-wrought cotton and silk goods into India duty free, has destroyed much of their native manufacture; while we have imposed from 100 to 300 per cent. duty on their sugars, coffee, pepper, rum, &c.—[ED.]



In the wilder parts of the district most of the thread belongs to the good women of the country, who give so much a cubit to the weaver for his trouble. Very coarse and thin cloth, from  $1\frac{1}{4}$  to 2 cubits wide, pays on this account  $1\frac{1}{2}$  pan of cowries ( $\frac{3}{8}$  rupees) a cubit ( $\frac{1}{2}$  yard). The weavers are, however, often paid partly in money, partly in thread, and partly in grain. In the more cleared part of the district, a good deal is made on the same terms, but many weavers there buy the thread and sell the cloth as woven. No person makes advances for it. Perhaps on the whole  $\frac{1}{8}$  may be woven on the weavers own account, and  $\frac{6}{8}$  on account of the spinner. All the cloth is very coarse and of an uncommon thin bad fabric.

The weavers of cotton carpets (*Sutrunjis*) are much on the same footing as in Ronggopoor and Puraniya. The tape-maker of Bhagulpoor makes also ropes of cotton for tents. Those who knit strings (*Patwars*) use not only proper silk, but also Tasar silk and cotton, and may make about 3 rupees a month. No advances are made. The chintz makers are on the same footing as in Dinajpoor. The blanket weavers work entirely the wool of the long tailed sheep, exactly as in Puraniya.

MANUFACTURE OF SUGAR.—The confectioners of this district prepare from the extract of sugar-cane, not only some of the kind of sugar called Chini, the process for which has been already detailed, but they make a good deal of a coarser kind called Shukkur, which is that chiefly used on the spot. I have not been able to learn the process.

I have nothing new to offer on the subject of Indigo. The works are judiciously constructed, and all built of brick. Mr. Christian alleges that fine indigo cannot be prepared from river water; and in support of his opinion says that he employed the same persons to make indigo, at the same works, and water both from a well and from the river, and the uniform result was, that the indigo made from the latter was of an inferior quality. I did not hear that any of the native manufacture is continued. Soda is found in some parts of the district; but it is merely collected by the washermen, and undergoes no preparation.

The earth containing nitre is called *Sora matti*, that is nitrous earth, or *Muya matti*, that is dead earth. On most

old mud walls near the bottom, where many animal impurities are generally deposited, this earth effloresces during the dry season; but owing to some unknown circumstance some walls do not produce it. It is not found in cow-houses, because these are kept clean; but it is found in the places (*Bathans*) where the cattle, that feed in the wastes, are assembled at night. It is also found about all old established villages, on the roads and places (*Gaundahar*) where the cattle are assembled as they go out or return from pasture, and where the carcasses of the dead are thrown. The efflorescing surfaces may be scraped once in from 8 to 15 days, during dry weather: but rain stops the process for some time. The saline earth procured from old walls is reckoned the best; but both kinds are used indiscriminately, and mixed, as they can be procured. About the 1st of September a space of from 3 to 10 kathas, or from about 5400 to 18000 square feet, is ploughed round each boiler (*Kuthi*), and is kept clear of weeds throughout the season. This space is called the Phar, and its use is for spreading out the saline earth to dry. The filtering cistern is rather larger than in Puraniya, but there is no other difference in the apparatus. In each cistern are put about 2 or 3 sers of ashes from the furnace, with from 15 to 25 baskets of earth, each basket being as much as a man carries on his head, or perhaps 60lbs. The earth that remains after filtration is called Sithi, is collected in a heap, and kept until next season, when a portion is always mixed with the fresh nitrous earth brought in from the villages, spread out on the Phar to dry, and then filtered. The Ras, Muran, or ley, is boiled in unglazed earthen pots, each containing 10 or 12lbs. weight; and after some evaporation, the contents of from 10 to 12 of these boilers are thrown into a large wide mouthed jar (*Nand*). During the night the liquor cools and deposits some nitre. The liquor that remains is called Kahi, is boiled and cooled a second time, and deposits more nitre. The liquor which then remains is called Jarathi, and is thrown on the heap of earth called Sithi. The scummings, called Udiyan, are here thrown away as useless; and the people allege that the Khari-nemak comes from Dharhara, in Tirahut, and is prepared from a peculiar earth.

The Company purchases the nitre of the second boiling (*Kulmi*), which is prepared by the same manufacturer that

makes the crude nitre (Kachcha). Eight or 10 sers (16 to 20 lbs.) are dissolved in a large pot of boiling water, and allowed to stand for about an hour and-a-half, when the earth subsides. The clear solution is then taken out by a cup, evaporated to a sufficient degree, and put into a vessel to cool. When cool, the contents are poured on a strainer, which retains the nitre, and allows the ley to run through. This ley also is called Jarathi, and is thrown on the heap of earth called Sithi. The remains of this ley are washed from the nitre by pouring a little cold water on the contents of the strainer. Four sers of raw nitre give 3 sers of Kulmi, such as is exported by the Company to Europe.

On the north side of the river the commercial resident purchases the whole nitre by contract at 2 rs.  $4\frac{3}{4}$  anas a *man* (82 s. w. the ser), = 84 lbs.  $2\frac{1}{4}$  oz. avoirdupois. The nitre is delivered on the spot in bulk, and the Company is at the expence of carriage, risk and package. The commercial resident has three agents (Gomashtahs) at Chhapra Singgiya and Man. These make advances to the contractors (Asamis), who are all natives of the place, wealthy and respectable men. Under the agent of Man are eight contractors. Babu Gondar, one of these, is contractor for seven Pergunahs, two only of which, Chhai and Pharkiya belong to this district. He again employs agents (Gomashtahs), who reside in the different Pergunahs, make advances to the actual manufacturers, receive the nitre from them, and deliver it to the order of the commercial resident. Each of these inferior Gomashtahs, or agents of the contractor, has whatever messengers he requires, he paying their wages; but the commercial resident furnishes each with a badge of authority; for without that nothing in this country can be done. The contractor makes as much nitre as he can, and refuses no man employment. He advances  $2\frac{1}{8}$  Arcot rupees for the *man* of 101 s. w. a ser, or rather more than 103 lbs.  $14\frac{3}{4}$  oz. At this rate he pays sicca anas  $42\frac{8}{100}$  for the large *man*, which he delivers to the Company for  $36\frac{3}{4}$  anas a small *man*, or at  $45\frac{6}{100}$  anas for the large *man*; so that he has only 5,674 rs. profit on 100,000, and out of this he pays all charges of merchandize, and risk of bad debts. He however receives in advance all the money that is necessary. So small a premium or agency, would show a great

economy in the management of the Company's concerns ; but, although I have not been able to trace with certainty the circumstance, I have no doubt that this is not a fair statement, and that some source of profit was concealed. One indeed will be afterwards mentioned ; but it is only conjectural.

The actual manufacturers are here called Nuniyas, or salt-men, and are of many different castes. At each furnace are employed from three to five persons, men and women. The latter boil ; the former collect earth and fuel, for which they pay nothing. The quantity made in Chhai and Pharkiya varies from 800 to 1,400 *mans* delivered to the Company, according as the season is dry or wet ; but the average is about 1,300 *mans*, the unfavourable years being few. Each furnace therefore makes on an average 9 *mans* 7 *scers* heavy weight, for which the owners receive 26 rs. 6 *anas* (Arcot) ; but these are commonly current. Each furnace employs two ordinary families, that is two married men and their wives ; but each can cultivate a small farm, or can work as a labourer during the season, when there is the greatest demand. In fact most of them have farms of one plough. Some few of them have sheds, under which they boil during days of occasional rain, that happen in the fair season ; but none have places in which they can deposit earth for boiling in the rainy season, and they are too necessitous to be able to keep until then, the crude nitre for refining.

EXPORTS AND IMPORTS.—The accounts which I procured of these were uncommonly defective, the merchants being very shy, and much alarmed. In almost every case, where I had an opportunity of forming any estimate, I found that the quantities reported by the traders were rated very much under the real amount ; and that these people carefully concealed the extent of their trade. I have little reliance therefore on the amounts stated in the table ; but it will serve to show the nature of the articles in demand, and their proportional importance, as one is likely to be as much diminished as the others.

Brokers are partly employed in the eastern parts to purchase silk, and partly in the western parts to purchase whatever is wanted, but chiefly grain. The Kothiwals or bankers are on the same footing as in Puraniya. Two indigo planters

deal in bills of exchange, and one of them to a greater extent than any person in the district. Of the natives one house belongs to the place, the others are strangers. They take bank notes at a small discount, of from  $\frac{1}{2}$  to 1 per cent. Both those who change gold and silver, and those who deal in copper money and cowries are usually called Surrafs, although Fotdar is also a term known for the latter people. Many Modis, druggists, and drapers deal in small money, and some of the Surrafs in their turn deal in cloth and cotton. Both kinds of Surrafs and Modis advance money or provisions, to those who are living on monthly wages, or allowances.

In the district are seven Rokari or Nukudi Mahajans, who lend money as in Ronggopoor. They have capitals of from 10 to 50,000 rs. Two of them in Mungger formerly dealt in bills of exchange, and on that account are called Kothiwalis, but have of late given up that branch of commerce, owing probably to the introduction of bank notes.

*Places where Commerce is carried on.*—The people here are somewhat less addicted to markets than those of Bengal, and deal more with shop-keepers, or with traders, who have small warehouses.\*

The same complaints concerning illegal exactions, taken at market places, exist here as elsewhere, and it is alleged, that they are usually made in the name of God, some pretended religious mendicant being appointed by the Zemindar to collect money for the celebration of some ceremony, or for the support of some place of worship; but a trifle merely is expended, and the remainder is divided between the mendicant and the Zemindar. Farther, in every great market the Zemindars erect sheds, and take duties from those who use them; and it is alleged, that none are allowed to sell articles of any amount who do not use these sheds. The Company, when the duties on the market places were abolished, purchased the land, and the right to erect such sheds, should be perhaps reserved to government, and might be made a source of revenue. It is farther alleged, that all the understrappers of police help themselves to whatever

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\* The ancient custom of markets is prevalent in India generally; it would be a good policy to establish fairs in central towns, annually or biennially.—[ED.]

they want, and the difficulty of procuring any thing whatever at the capital, is by many attributed to this practice.\*

During the Mogul government it would appear, that in towns every trade had a chief called by various names, such as Chauduri, Mistri Dangriya, &c., who received petty fees from his associates, represented all grievances to the officers of government, regulated the prices of labour and commodities, settled petty disputes, and supplied any large demands, such as when persons of rank, or bodies of troops passed. Some of these persons have still the (Purwanahs) grants made to them or their fathers, either by Mogul officers, or by the collectors who succeeded; and in the three towns, every trade still continues to obey very implicitly the orders of some such person, although now, I believe, they have no legal authority. In fact, I find that the only thing which these people now attempt to do, is to fleece the Europeans, who may pass. No person but these men will sell anything to an European's servant, or perform for him any service, and these persons fix prices altogether unreasonable, must be always paid in advance, and very often perform what they have stipulated in a very inadequate manner. The only remedy is a civil action, probably to be tried two or three years afterwards, and in which the witnesses must perhaps be sent some hundred miles. This is a complete bar to every complaint. At some principal market places on the road, one person of this description (Chaudhuri or Dangriya) has a superintendence over the whole, and acts much in the same manner. I would propose, that in the chief towns at least, such persons should be legally appointed from year to year, and selected by the magistrate from among the most respectable persons of the trade or profession; and that in the appointment the inclination of the members of the trade or profession should on all occasions be consulted. The duties of the persons selected should be the same as in the Mogul government. In the same manner the general charge of the police in these towns should be entrusted to one or more chief merchants or traders, who should be annually appointed, with the con-

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\* The Author strongly recommends Municipal Government for the principal towns.—[Ed.]

sent and approbation of the Chandhuris, and who should also act as commissioners for the decision of petty suits. Duties of course should be levied to defray the expense of the establishment in clerks and messengers; and for keeping the roads through the towns clean and practicable.

*Coins, weights and measures.*—The Calcutta Kuldar rupees are by far the most common currency, and not above  $\frac{1}{4}$  of them have been marked. Other rupees pay a Batta, or deduction, except in the purchase of cloths, all of which are sold for inferior money. Gold has almost entirely disappeared; and, if wanted, must be purchased at from  $16\frac{1}{2}$  to  $16\frac{3}{4}$  rupees for the Mohur. In the Behar part of the district, copper money is much more common than cowries, and even in the Bengalese part it is current. The common Paysas, or copper money are Lohiya, or Herba, and Gorakpoori. The latter are pure copper, the former are said to be adulterated with iron. The marks are totally worn away, and no one can tell by whom they were or are made. The average value is 64 for a rupee; but it is constantly fluctuating, according to the operations of the money changers. In the S.W. part of the district, coin is seldom seen, and most commercial transactions are carried on by exchange of commodities. At the capital almost every thing is sold by an imaginary money called Taka, the name which in Bengal is given to the rupee. The Taka of Bhagulpoor contains two paysas, each paysa 64 cowries.

*Weights.*—All that I have said in my account of Dinajpoor concerning weights, is applicable to this district.\* The Paseri varies from 5 to 14 sers. The weights in general are regulated by a copper coin called the Madhusahi Paysa, which is not current, and very seldom procurable; so that no proper means of detecting false weights exist. Some people indeed pretend to have iron or stone weights that are of the regular standard, but I know not how they could be taken in evidence. It is also alleged, that the ser of 80 sicca weight is equal exactly to  $46\frac{1}{2}\frac{2}{3}\frac{8}{9}$  Madhusahi Paysas; but for the sake of calculation it is usual to take  $46\frac{1}{2}$ . In the former

\* A general standard of weights and measures throughout India would be a great advantage to commerce.—[Ed.]

case, taking the s. w. at  $\frac{1}{80}$  of a Calcutta ser, the Madhusahi Paysa will be nearly  $309\frac{8}{10}$  grains.

Except in beating rice to free it from the husk, no grain measures are used, every thing is sold by weight. In the forests, the women who beat rice receive the rough grain, and deliver the clean by a measure called Paliya, which is said to contain about  $\frac{3}{10}$  of 100 s. w.; but as the same individual measure is used in receiving and delivering, its capacity is of no consequence. At the three towns are professed weighers (Kayals), and on many estates there is a weigher of grain in every manor. He is not sworn, nor, if detected in fraud, is he liable to any extraordinary punishment. Among the natives it is generally admitted, that vast frauds are committed by the sleight-of-hand in weighers, and to this was attributed the apparent lowness of the profits which the contractor for salt-petre has. When I asked at other persons, whether he had given me a fair account, and how he came to be contented with 5 per cent. for all charges and risks of merchandise, it was answered, that "he weighed the salt." A few years ago most of the weights were stamped, by order of the magistrate, and none, except such as have been stamped, are considered legal. With such a want of a standard, the expedient of stamping is perhaps dangerous, leaving room for the most atrocious frauds and corruption.

The land is mostly measured by a pole, and here this is laid on the ground, and a mark made at each length. This is vastly superior to the extraordinary plan adopted in Pularaniya; and is not liable to many objections that arise from the use of a rope: but in this manner it is very difficult to measure any line straight, and every deviation is in favour of the landlord. The number of rods in each Katha varies extremely, and even the cubit differs much in length. The length of a man's fore arm and hand is the standard in common use, and is supposed to be divided into seven Girhas; but the cubit in use varies from seven to nine girahs. In every other part that I have been, the bigah consists of twenty kathas, but in many parts of this district it contains only eighteen. No standards are to be found in the collector's office, where it is only known whether the customary bigah of each Pergunah contains eighteen or twenty kathas, but the number of cubits in each katha, and the size of the cubits,



have not been recorded. In some parts, however, the people have a yard and cubit, used chiefly for measuring cloth, and, where such are used, they were stamped at the same time with the weights. The people here have only one name (Guz) for both measures.

*Conveyance of goods.*—As will appear from the account of the rivers, a great part of the district is not at all provided with water carriage; and, even on the banks of the great river the natives possess many fewer boats than I expected. The Ulaks, formerly described, are the boats most commonly employed in the transportation of goods; and are in general small, none exceeding 1700 *mans*, and most being under 800. The Patelas are rather fewer in number than the Ulaks, and about the same burthen; and, as I have mentioned in my account of Puraniya, differ only from the Koshas of that district in being wider in proportion to their length. The hire of these two descriptions of boats from Mungger to Calcutta, when the whole channel of the Bhagirathi is navigable, is from 10 to 14 rs. for the 100 *mans* burthen, reckoned by the quantity of grain which the boat might carry. The ser is equal to 84 s. w. the 100 *mans*, therefore, are equal to 77 cwt. The distance is about 300 miles. In the eastern parts of the district some boats of large dimensions are used, during the floods, to convey fire-wood; but having been there in the dry season, I had no opportunity of seeing their structure.

Both men and boats are difficult to procure, although many of the boats are professedly kept for hire, and the office of Ghat Majhi, here as elsewhere, would require to be regulated. So difficult is it to procure boats, that at Kumurgunj almost all the trade with Mungger and Bhagulpoor is carried on by means of carts or oxen, although it stands on the bank of the river about half way between the two places. The boats called Dinggis, such as I have described in my account of Puraniya, are a good deal used; but many boats called Dinggis are clinker built, and on the Pateli construction. On so large and tempestuous a river as the Ganges these are very dangerous. Except the Nawab at Rajmahal, none of the natives possess boats of any kind accommodated for pleasure or travelling; but in the eastern divisions a tilt is

occasionally put over the after part of a Dinggi, which is then called a Pansi, and accommodates travellers.

Canoes are not much used, except in the eastern parts of the district, and in the inundated parts farther west the people are very much confined during the floods, and in cases of an inundation uncommonly high, have in general no means of escape. The Tal tree, so commonly used south from Calcutta, as a conveyance during the floods, is neglected every where here except in Kalikapoor, although it is very common.

In Lakardewani advantage is taken of the floods to float timber and bamboos down the torrents, but in Karakpoor and Gidhaur this is entirely neglected. In Kalikapoor again, towards the close of the season, when the water becomes scarce, floats are conducted down the creeks by making dams, and collecting the water, so as to render it deep enough to carry the floats for some way. When the float reaches the dam, another is made some way lower down, and the former one is broken to transmit the float. This is a very rude commencement of the art of constructing locks.

The greater part of the internal commerce of the district is carried on by carts, and back loads; but the roads are exceedingly bad. By far the most frequented and important road in Bengal, leading from Calcutta to Patna by Moorshedabad, passes through the whole length of the district; but for from two to three months every year it is not passable with any sort of carriage, or even with loaded cattle; and, even at other seasons, a four-wheeled carriage or wagon could pass with much difficulty, and some danger. There is in particular a great deficiency of bridges, and the descents into many of the creeks is so steep as to impede very much the passage, and to diminish the load of carts. In many parts there is an abundance of hard materials, with which permanent roads might be made; but, as in others these materials are too remote, and as one bad place renders the whole useless as a line of communication, no attempt at improvement, farther than what I have formerly recommended, should perhaps be made. A great part of the labour of the convicts, as usual is employed in making roads near the capital and Mungger, which, although no doubt of

some use, are chiefly intended to give the European ladies an opportunity of taking an evening ride; and much also, as usual, is wasted on keeping the grounds of the Europeans in neat order. Were the whole bestowed on the great road, it might be kept in tolerable repair, during nine months in the year, and might be gradually so raised, as to be easily practicable at all seasons on foot. This care might be also extended to the branch from Paingti to the great road, which opens the communication with Puraniya, and is only a few miles in length.

Another line of public communication is still wanted; there is no road between Bhagulpoor and Virbhum, so that the judges of circuit must return from the latter place to Moorshedabad before they proceed to Bhagulpoor. This appears to me a line of the utmost importance, and its formation would, I have no doubt, tend very much to improve the neglected interior parts of both districts; but the labour of the convicts, I am afraid, would be totally inadequate to the purpose, and indeed is scarcely sufficient, with every attention, to keep the present great road in order. Immediately south from Bhagulpoor is a considerable extent of very low land, through which a road can only be made by raising a mound; at present it is impassable for more than four months in the year, and all commerce with the interior is completely at a stand. After reaching the high land, although in general the soil is dry and firm, there are many interruptions. Many very narrow vallies of rice ground wind through the swelling grounds in all directions, and, until the beginning of December, cut off all communication. In every part there, however, there is such an abundance of hard materials, that the constructing causeways across these vallies would be an easy work, and timber is so plenty, that bridges could be of very little expense; for each valley would require at least one bridge, to allow the water to pass from one field to another. As a means for carrying this work into execution I would propose, that a tax should be levied on all pilgrims going to Baidyanath, and on this account, that the road should lead by that place from the capitals of the two districts. This, it is true, would not be the most direct line, but the inconvenience arising from the circuit would be compensated by the means of facilitating the passage, and of

accommodating the native travellers. All the remarks made on the roads of Puraniya are applicable to this district, except that here there is very little of the sandy bare plain, which there so much facilitates travelling.

Very much to the credit of Mr. Christian, an Indigo planter, he has made a road, better almost than any in the district, from his factory in Chandan to the river side near Suryagarha. The structure of the carts used in this district, I have already explained. Near the Ganges many are kept for hire, and receive  $4\frac{1}{2}$  anas a day, including  $\frac{1}{2}$  ana given for the driver's food. The little rude carts in the forests are an exceedingly great convenience, as they go in almost any road. Horses are not kept for carriages so much as in Puraniya, although all through the Behar part of the district there are some. They are nearly of the same quality with those in Puraniya, but rather worse, and more wretched. The mares are wrought, as much as the horses.

The Baldiya or Ladubeparis are very numerous, and have many cattle, which, they are willing to hire, when they have no speculation in view, and their cattle are very good. The rate of hire is the same as in Puraniya. Porters are only used to unload boats, or to convey passengers' baggage. In every part of the district, except Mungger, there is the usual difficulty in procuring conveyance of any kind; but at Mungger, no difficulty occurs in procuring good oxen and porters, at a very reasonable rate. I cannot yet judge, how they will perform their duty. On the great road a good deal of attention is paid to establish proper ferries, and the boats are very good and safe conveyances. On the more important ferries on the great river no attention greater than in Puraniya is shown by the police, and most of the Dinggis, being of the Pateli construction, are exceedingly unsafe on such a river. The boatmen are appointed by the Zemindars, who annually receive a rent given under the name of homage (Salami). The Sadabratas, or places where travellers experience a hospitable reception, are not numerous. Some of them belong to Muhammedans, who receive the pagan as well as the faithful; nor are the Hindus deficient in liberality, all sects being entertained, wherever the place is called a Sadabrata. Some places of entertainment however receive only religious men, and are called Akharas. On the north side of the Ganges,

in the division of Lokmanpoor, all religious mendicants may apply to the chief farmer (Jethraiayat) of the place, and obtain a supply of food. The farmer levies the expense by shares from his neighbours.

The Modis here do not entertain strangers, so that in the greater part of the district travellers are but poorly accommodated. This is especially the case in the Mallepoor division, where no one except some foreign traders at Mallepoor will receive into his house any stranger even a Brahman. This is owing to an excessive jealousy of their women. On the great road however more attention is shown to the real convenience of travellers, than in any part of India, which I have yet visited; and regular inns (Sarays or Bhathiyarkhanahs) are kept at convenient distances. Each inn consists of a number of distinct chambers; which are let by the night to any traveller or company, 8 or 10 persons travelling together often occupying one chamber. The chamber usually consists of a wretched straw hut, 7 or 8 cubits long and 5 or 6 wide, and is in general totally destitute of furniture; a few only afford a little straw or a mat to sleep on; but some, kept by obliging nymphs, have bedsteads, where favourites are received. The Bhathiyaras or keepers are low Muhammedans, such attention to strangers being incompatible with Hindu reserve; and many of their women, but by no means the greater part, refuse no favour to a liberal customer. Each keeper, according to his means, has a number of chambers, which are usually disposed in a row (Alang); and in most inns are several keepers, whose rows of chambers surround squares or wide lanes, in which the cattle or carriages of the travellers stand. Hindus pay from 1 to 2 Paysas ( $\frac{1}{8}$  to  $\frac{1}{4}$  rs.) a night for each chamber, and Muhammedans pay double, because the Bhathiyarin cooks for them. The keeper generally retails fire-wood, tobacco and the charcoal balls used in smoking and purchases for his guests whatever other articles they want. Some of them also retail earthen ware, and shoes. Hindus of the highest rank can sleep in such places, when no pure person will give them accommodation; but they of course can receive little or no assistance from the keeper, who cannot bring water that the guest will use, nor can the Brahman cook in the inn. He must go to some pure place, and for that purpose usually selects the side of a river, which

in this country is the most common abode of Cloacina. In the Muhammedan government there had been erected an inn of brick at Rajmahal, which was a square surrounded by numerous small chambers, managed exactly in the same manner as above described. These have now become quite ruinous, and the keepers have erected huts in the square. Col. Hutchinson, late superintendant of the invalid establishment, built two wretched inns of brick, totally destitute of elegance, and containing very small accommodation. They are much neglected, and the keepers prefer their straw huts; because, as they allege, every petty messenger belonging to the police or any other public establishment, insisted on using the chambers without payment, and even accommodated their horses in the rooms.

At the different invalid villages near the great road the same gentleman, built a number of bungaloes; intended partly I believe, for his own accommodation, when he visited his charge, and partly for the accommodation of European gentlemen travelling the great road. These bungaloes probably have cost the public much, and the accommodation, which they afford, is very trifling. Were they at regular convenient distances, so that officers travelling from Berhampore to Dirapore might go on horseback by stages, and find every night a place of accommodation, and were this kind of accommodation extended on one hand to Delhi, and on the other to Calcutta, it might be useful, although without reliefs of horses, and accommodations to enable a person to travel without servants, little more progress could be made, than in travelling by water. As no change of horses can be procured, and as no man can go the road without waiting for servants to bring him food and raiment, these bungaloes may on the whole be considered as not at all facilitating the progress of the traveller, although no doubt they have on some occasions proved a convenience to persons laying horses for short distances, or to those going post by palanquin, when these have been overcome with heat and fatigue; but the service of which they have been, has been so trifling, that their construction must be considered as a waste of money, and even their repair would be superfluous. Most of them are now very ruinous.

# APPENDIX

OF

## STATISTICAL TABLES,

CONNECTED WITH THE SURVEY.

### BHAGULPOOR.

A.—Estimate of the population of the district of Bhagulpoor.

Division or Thanah.	Sects.			Employment.			Number of marriage-able girls remaining single at 15 years of age.
	Muhamm.	Hindus.	Total.	Idlers.	Labourers.		
					Art. sers.	Culti- vators.	
Kotwali . . . . .	37125	61876	99000	25000	24500	49500	400
Ratnagunj . . . . .	52900	158700	211600	53000	13000	145600	100
Kodwar . . . . .	20200	44300	64500	6000	6000	52500	25
Lokmanpoor . . . . .	30600	87100	126700	15800	7900	103000	200
Gogri . . . . .	28300	122300	150700	23500	7900	130000	50
Kumargunj . . . . .	5600	16900	22500	2800	5600	14100	25
Mungger . . . . .	11400	33900	45300	8000	10000	27300	300
Suryagarha . . . . .	12375	37225	39600	9900	5000	24700	60
Mallepoor . . . . .	9750	146250	156000	10500	20200	187800	30
Tarapoor . . . . .	44900	134900	179800	22400	11200	146200	60
Bangha . . . . .	54000	173000	227000	13000	6000	207000	25
Fayezullahgunj . . . . .	12700	76300	89000	5600	5600	77800	200
Paingti . . . . .	2100	6200	8300	500	2000	5700	5
Rajmahal . . . . .	54050	54050	108100	35000	13500	71000	125
Phutkipoor . . . . .	3200	10000	13200	1650	1650	9900	110
Furukhabad . . . . .	5900	17700	23600	1100	1500	21000	100
Pratapgunj . . . . .	23000	28500	51500	3800	9600	48100	150
Aurungabad . . . . .	16700	26000	42700	4300	2900	37500	20
Kalikapoor . . . . .	26000	26000	52000	6500	3300	42200	50
Lakardewant . . . . .	300	29700	24000	23000	7400	29900	300
Northern Mountaineers . . . . .	..	38000	38000	..	..	38000	..
Southern Mountaineers . . . . .	..	20000	20000	..	..	20000	..
Total . . . . .	450000	1150000	2010000	269000	177800	1578000	2125

B.—GENERAL STATISTICAL TABLE OF THE DISTRICT OF BHAGULPOOR.—In Square Miles.

Number.	Division or Thanah.	Extent in square miles.										Soil and Situation.										Manner of Occupation.										Commerce.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
		Rivers, tanks, marshes and water courses.										Liable to be under water.										Altogether unfit for the plough or waste.										Lands actually occupied by those who use the hoe alone.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												



*C.—Proportion of Inundated Land in the Bhagulpoor District that is covered during the whole rainy season, and that is only occasionally covered.*

Constantly under water or mere barren channels 364 square miles; Regularly inundated throughout the rainy season 1199; Liable only to occasional floods but every year covered for some days at least 402; Entirely exempt from inundation 6260.

*D.—Manner in which the people of the District of Bhagulpoor are lodged.*

Families that are partly or in whole accommodated in houses built of brick 616; In houses that are not built of brick but are roofed with tiles 604; In houses built of clay with two stories 4679; In houses of one story with mud walls 94344; In houses with reed walls plastered with clay 137876; In houses with reed walls but not plastered 78542; In huts built like a bee hive 16584; Total 333245.

*E.—State of education in the district of Bhagulpoor.*

Men fit to act as writers born in the division 5135; Employed at home 2083; Employed abroad 1107; Not employed 1695; Strangers employed here as writers 1260; Men belonging to the district employed in the regular army 507; Employed in the police or revenue 4045; Employed abroad in the police or revenue 1581; Not employed 3585; Strangers employed in the police or revenue 1110.

*F.—Manner in which the Cultivated Lands of the District of Bhagulpoor are occupied.*

Number of houses 62475; Trees 59535; Bamboos 935; Kitchen gardens 42700, Vegetables in the fields 5615; Broadcast summer rice by itself 193100; Do. do. followed by Masur 9900; Do. do. do. among the stubble 350; Do. do. do. mixed with Linseed 6915; Do. do. do. with Barley 1400; Do. do. do. with Sarisha 2280; Do. do. followed by pease 11230; Do. do. followed by Khesari 4980; Do. do. followed by Mashkalai 10410; Do. do. followed by do. sown among the stubble 9800; Do. do. followed by Kuthi 110; Do. do. mixed with Arahar 2200; Do. do. followed by Pease mixed with Rayi 4875; Do. do. followed by Wheat 12325; Do. do. followed by Barley 11050; Do. do. followed by Wheat mixed with Sharisha; Do. do. followed by Barley mixed with Rayi 750; Do. do. followed by But or Chana 9985; Do. do. followed by Kabali But 1525; Do. do. followed by But mixed with Masur; Do. do. followed by But mixed with Wheat 750; Do. do. followed by But mixed with Barley 1400; Do. do. followed by But mixed with Linseed 975; Do. do. followed by But mixed with Sarisha 150; Do. do. followed by Linseed 5280; Do. do. followed by Linseed mixed with Sarisha; Do. do. followed by Sarisha 8225; Do. do. followed by Seuti Sarisha 600; Do. do. followed by Rayi sown among the stubble 350; Do. do. mixed with Kangni 1200; Do. do. followed by Vaisakhi China 855; Do. do. followed by Rarhiya Cotton 150; Do. do. followed by Rarhiya Cotton mixed with Pease 400; Do. do. followed by Rarhiya cotton mixed with Sarisha 300; Do. do. mixed with Barabangga cotton 230; Transplanted summer rice by itself 43775; Broadcast Sati rice by itself 6586; Do. Jali by itself 2700; Do. Kartika by itself 1550; Transplanted winter rice by itself 772775; Do. do. followed by Khesari sown among the stubble 143550; Broadcast winter rice by itself 1513310; Do. do. followed by Khesari sown among the stubble 156880; Do. do. followed by But sown among the stubble 1800; Do. do. mixed with Harimung 21500; Spring rice 5690; Kangni by itself 2840; Kherisamora by itself 36950; Kheri by itself 35470; Do. followed by Masur 1400; Do. followed Masur mixed with Linseed 2150; Do. followed by Pease 1300; Do. followed by Pease mixed with Barley 750; Do. followed by Khesari 1100; Do. followed by Mashkalai or Urid 1600; Do. followed by Kulthi 3000; Do. mixed with Arahar 2100; Do. followed by Wheat 3400; Do. followed by Barley 2350; Do. followed by But or Chana 1750; Do. followed by But mixed with Linseed 100; Do. followed by Sarisha 2500; Do. followed by Sario 1300; Do. followed by Rayi 100; Do. followed by Rayi mixed with Linseed 600; Do. followed by Bhujaru cotton 625; Maruya transplanted by itself 860; Do. broadcast by itself 60550; Do. followed by Masur 3800; Do. followed by Masur mixed with Linseed 200; Do. followed by do. mixed with Barley 900; Do. followed by Pease 550; Do. followed by Pease mixed with

Barley 1100; Do. followed by Pease mixed with Rayi 550; Do. followed by Khesari; Do. followed by Kulthi 8800; Do. mixed with Tulbulikalai 300; Do. mixed with Arahar 8250; Do. mixed with Arahar and Ricinus 2400; Do. mixed with Arahar and Kangni; Do. mixed with Bora 150; Do. mixed Kangni 300; Do. followed by Wheat 12325; Do. followed by Barley 8750; Do. followed by But 1600; Do. followed by But mixed with Barley 450; Do. followed by But mixed with Linseed 150; Do. followed by Sarisha 7400; Do. followed by Rayi 200; Do. followed by Linseed 100; Do. followed by Rarhiya Cotton mixed with Gota 900; Do. followed by Rarhiya Cotton mixed with Gota and Pease 50; Maize by itself 139290; Do. followed by Masur 4750; Do. followed by Masur mixed with Linseed 3100; Do. followed by Pease 2900; Do. followed by Pease mixed with Barley 4100; Do. followed by Pease mixed with Khesari and Barley 1000; Do. followed by Khesari 500; Do. followed by But 9350; Do. followed by But mixed with Barley 1400; Do. mixed with Arahar 33450; Do. mixed with Arahar and Ricinus 7750; Do. mixed with Arahar, Kangni and Barabangga Cotton 30; Do. Do. mixed with Bora; Do. followed by Wheat 17250; Do. followed by Barley 13450; Do. followed by Barley mixed with Sarisha 1200; Do. followed by Sarisha 25950; Do. followed by Sarisha mixed with Rarhiya Cotton 100; Do. followed by Rayi 1200; Do. followed by Linseed mixed with Sarisha 850; Do. followed by Vaisakhi China 500; Do. mixed Kangni 250; Do. mixed with Barabangga Cotton 550; Do. mixed Gajar Cotton 1760; Do. mixed with Gajar Cotton and Ricinus 1640; Do. mixed with Kartika Cotton and Ricinus 2900; Kodo by itself 14300; Do. followed by Masur 550; Do. followed by Masur mixed with Linseed 1400; Do. followed by Masur mixed with Rayi and Linseed 600; Do. followed by Pease; Do. followed by Mashkalai 200; Do. mixed with by Arahar 3355; Do. mixed with Arahar and Ricinus 50; Do. followed by But 100; Do. followed by Wheat 1750; Do. followed by Barley 2550; Do. followed by Barley mixed with Pease 250; Do. followed by Sarisha 700; Do. followed by Rayi 1000; Do. followed by Linseed 1000; Do. followed Linseed mixed with Rayi 50; Janera Gohama by itself 9205; Do. Chauliya by itself 200; Do. mixed with Til 650; Do. mixed with Til and Bhetmas 50; Do. mixed with Ricinus 50; China Asharhi by itself 3400; Do. Bhadaï by itself 580; Do. Kurtika by itself 100; Do. Maghi by itself; Do. Vaisaki 11870; Do. do. followed by Masur 600; Do. do. followed by Field Pease mixed with Barley 1200; Do. do. followed by Wheat 600; Do. do. followed by Rayi 250; Do. Asharhi followed by Vaisakhi China 1100; Do. Bhadaï followed by Vaisakhi China 250; Gundli by itself 7860; Nauya Gundli by itself 2680; Gundli followed by Kulthi 2860; Bhetmas by itself 925; Wheat by itself after culture 393985; Do. sown in the mud without previous culture 200; Do. mixed with Masur 3000; Do. mixed with But 3750; Do. mixed with Sarso 11450; Do. mixed with Rayi 1000; Barley by itself after regular culture 231900; Do. sown among the mud without previous culture 500; Do. mixed with Masur 2200; Do. mixed with Pease (Jaokeras) 66850; Do. mixed with Pease and Khesari (Jaokeras) 19500; Do. mixed with But 2200; Do. mixed with Sarisha 2900; Do. mixed with Rayi 500; Do. mixed with Linseed 800; Masur by itself 32850; Do. mixed with Barley 160; Do. mixed with Linseed 15335; Do. mixed with Linseed and Sarso 3400; Do. mixed with Sarisha 3590; Field Pease Maghi by themselves 48700; Do. Vaisakhi by themselves 49700; Do. Kabali by themselves 7750; Do. mixed with Rayi and Khesari 5000; Do. mixed with Rayi or Mustard 10230; Khesari sown in the mud without culture 1100; Do. by after cultivation 31850; Mashkalai by itself after cultivation 136985; Do. sown in the mud without culture 146525; Tulbulikalai by itself 180; Kulthi by itself 147930; Harimung by itself 200; Mahananda or Behamung by itself 2250; Methkalai by itself 4500; Suthrakalai by itself 200; Maghi Arahar by itself 2600; Vaisakhi Arahar by itself 19680; Do. do. mixed with Bhetmas 970; Do. do. mixed with Tulbuli 75; Do. do. mixed with Harimung 650; Do. do. mixed with Ricinus (Vaghrengri) 400; Do. do. mixed with Ricinus (Chanka) 400; Bora or Gangra by itself 10150; Do. or Chhota Gangra by itself 5000; But by itself 79450; Do. or Chana mixed with Barley 1225; Do. do. mixed with Linseed 29200; Do. do. mixed with Linseed and Rayi 150; Do. do. mixed with Sarisha 3250; Kabali But by itself 6490; Sarisha, Gota, Lotni, Turi or Maghuya by itself 90170; Sarso or Pingri by itself 46250; Rayi, Belangchi, or Mustard by itself 74800; Gangrayi by itself 9550; Rayi or Mustard sown without any previous culture 2550; Sarisha or Gota mixed with Linseed 150; Sarso mixed with Safflower 440; Senti Sarisha by itself 1100; Linseed by itself 16250; Linseed mixed with Safflower 100; Til by itself 23655; Charak Til by itself 5000; Sargujaya by

itself 5100; Patuya or Meghnal by itself 2560; Do. followed by Sarisha 20; Amliya Chandana and Kudrum by itself 2315; Chandana or Kudrum mixed with Arahara 90; Sar or Kasmira by itself 1280; Tobacco by itself (Mandhata) 8110; Do. (Thariya) by itself 255; Gangja (Hemp) by itself 30; Betleleaf 261; Sugar cane (Khagri) by itself 6270; Do. (Paungdi) 4700; Do. (Raungda) 1700; Do. (Karuya) 600; Do. (Nargori) 3603; Do. Mango 2000; Cotton (Barabangga) by itself 400; Do. (Rarhiya) by itself; Do. (Bhujaru) by itself 395; Do. (Gajar) by itself 530; Do. (Bhoga) by itself 230; Do. (Athiya) by itself 25; Do. (Barabangga) mixed with Suthni 530; Do. do. mixed with Ricinus 395; Do. (Rarhiya) mixed with Gota or Sarisha 940; Do. do. mixed with Sarisha and Mahanandamung 300; Do. do. mixed with Gota and Pease 200; Do. (Bhujaru) mixed with Kulthi 40; Do. do. mixed with Mung or Sehamung; Do. do. mixed with Rayi 16; Do. do. mixed with Safflower 50; Do. do. mixed with Ricinus or Eringri 40; Do. do. mixed with Ricinus, Safflower, and Rayi 125; Do. (Gajar) mixed with Ricinus 310; Indigo by itself for the plant alone 17575; Do. by itself for seed and plant 4360; Do. for seed alone 1080; Do. mixed with Masur 2000; Do. mixed with Pease 900; Do. mixed with Mashkalai 5980; Do. mixed with Kulthi 3546; Do. mixed with Maize 140; Do. mixed with Wheat 500; Do. mixed with Barley 1100; Do. mixed with Sarisha 11380; Do. mixed with Rayi 4010; Do. mixed with Sarisha for plant and seed 60; Do. mixed with Linseed 2150; Do. mixed with Bhujaru Cotton 1000; Mulberry by itself 2350; Safflower by itself 390; Do. mixed with Pease 70; Do. mixed with Pease and Ricinus 40; Do. mixed with Turi or Gota 50; Do. mixed with Reingchi 125; Do. mixed with Ricinus 20; Ricinus by itself 1960; Do. mixed with Sarisha 860; Carrots by themselves 650; Do. mixed with Safflower 50; Suthni by itself 215; Do. mixed with Arahara 250; Do. mixed with Kartikabangga or Cotton 25; Do. mixed Barabangga Cotton and Ricinus 250; Potatoes by themselves 100; Ginger by itself 550; Do. mixed with Suthni 20; Turmeric by itself 810; Do. mixed with Vaisakhi China 40; Do. mixed with Barabangga (Cotton) 50; Do. mixed with Ricinus 50; Peyaj (Sangchi and Dhemra) or Onion by itself 1035; Do. or Onion mixed with Suthni 100; Garlic by itself 530; Jira by itself 60; Dhaniya by itself 240; Ajoyan by itself after cultivation 95; Do. sown on the bank of rivers without ploughing 1195; Mauri or Saongp by itself 120; Methi by itself 305; Chandani or Randhuni by itself 340; Kalijiri or Mangrela by itself 40; Seedling land by itself 23775;—Total 5681280.

*G.—General Abstract of the value and produce of lands occupied by farmers who cultivate with the plough in the District of Bhagulpoor.*

Fruit trees value of fruit in Rupees 215895; Bamboos value cut annually in Rupees 2357; Vegetables, &c. in gardens and fields value in Rupees 254385; GRAIN—Rice—Quantity in Mans 19:35950; Value in Rupees 10259757; Quantity remaining for consumption after deducting seed 18399605. *China, Kangni, Kheri, Maruya, Maize, Kodo, Jenara and Gundli*—Quantity of Mans 2664791; Value in Rupees 1306395; Quantity remaining for consumption after deducting seed 2566998. *Wheat and Barley*—Quantity in Mans 4305092; Value in Rupees 2810272; Quantity remaining for consumption after deducting seed 3974309. *Pulse*—Quantity in Mans 3768152; Value in Rupees 2270465; Quantity remaining for consumption after deducting seed 3538570. *Sarisha, Linseed, and Tili*—Quantity in Mans 891807; Value in Rupees 1028422; Quantity remaining for consumption after deducting seed 874092. *Sugarcane*—Quantity in Mans 168380; Value in Rupees 278108. PLANTS FOR MAKING THREAD AND ROPE—*Pata and San*—Quantity in Mans 18093; Value in Rupees 22715. *Cotton*—Quantity of Mans 20974; Value in Rupees 57881. PLANTS FOR SMOKING AND CHEWING—*Bette leaf*—Value in Rupees 36700; *Tobacco*—Quantity of Mans 29806; Value in Rupees 63247. *Gangja*—Quantity of Mans 130; Value in Rupees 1866. PLANTS USED FOR DYING—*Indigo, Plants*—Value in Rupees 102172. *Seed*—Quantity in Mans 3273; Value in Rupees 10213. *Safflower flower*—Quantity in Mans 190; Value in Rupees 1799. *Seed*—Quantity of Mans 1216; Value in Rupees 1139. PLANTS FOR REARING SILK-WORMS. *Tul or Mulberry*—Value in Rupees 40400. *Ricinus*—Value in Rupees 27823. *Medicine*—Quantity in Mans 80; Value in Rupees 144; Quantity remaining for consumption after deducting seed 78. Total value of each Thanah as follows—Kotwali 512983; Ratnagunj 1582508; Kodwar 590653; Lokmanpoor 1939656; Gogri 2311469; Kangwargunj 196294; Mungger 480402; Suryagarha 420661; Mallipoor 1202907; Tarapoor 1674299; Bangka 2124065; Fayezullah—

gunj 631772; Paingti 119146; Rajmahal 790159; Phutkipoor 109117; Furrokhhabad 258011; Pratapgunj 681891; Aurunggabad 501436; Kalikapoor 740347; Lakardewani 1924377; Grand Total Rupees 18792162.

#### H.—*Estimate of the Live Stock in the District of Bhagulpoor.*

Number of Bulls reserved for breeding 5421; Value 51780 rupees. Bulls wrought in the plough, belonging almost entirely to the high casts 58115; Value 322290. Oxen used in wheel carriages 922; Value 16045. Do. used in carts 4424; Value 57514. Do. used for carrying back loads belonging to traders 22320; Value 246985. Do. used carrying back loads belonging to farmers 3535; Value 34870; Do. used for carrying back loads belonging to the high castes 3345; Value 29845. Do. used both in the plough and for carrying loads or to draw carts 82400; Value 509600. Do. used in machinery 4710; Value 20930. Do. used in the plough alone belonging to the high casts 130570; Value 936235. Do. used in the plough alone belonging to tradesmen 53180; Value 367875. Do. used in the plough alone belonging to mere farmers 595235; Value 3959707½. Buffaloes used in the plough and carts 1200; Value 9400. Cows belonging to the high castes 269825; Value 1610575. Do. belonging to tradesmen 180520; Value 1019320. Do. belonging to farmers 781420; Value 4577385. Do. wrought in the plough 200; Value 800. Young Cattle. Old Cattle. Buffaloes young and old 35160; Value 490725. Goats grown females 191400; Value 80718½. Sheep called Bheri grown females 3100; Value 1687½. Do. called Garar breeding females 5700; Value 3162½. Swine total 16390; Value 12402½. Horses preserved for carrying loads 1945; Value 12557½. Asses 225; Value 525. Camels 2; Value 220. Total Number 2451264. Total value 14373155½ rupees.

#### I.—*Estimate of the quantity of milk procured by the owners of cattle in the District of Bhagulpoor and of its value.*

Total Number of Cows 1231965; Do. giving milk 615982; Total milk in *mans* 2185684; Total value of milk in rupees 2091901; Total number of Buffaloes 35160; Number giving milk 17580; Total milk in *mans* 116030; Total value of milk in rupees 106364; Total milk in *mans* 2301714; Total value of milk in rupees 2198266.

#### K.—*Estimate of the number of Artists in the District of Bhagulpoor.*

1. Picture painters 16; 2. Mirasin 5; 3. Bais 16; 4. Khelonis 4; 5. Jhumriyas 10; 6. Natuyas 145; 7. Domnadomnis 10; 8. Bhangers 18; 9. Bishaharis 6; 10. Kirtaniyas 76; 11. Bhaganiya Kirtanigas 670; 12. Pirergayans 1; 13. Piranis 10; 14. Badyakars or Bajaniyas 4116; 15. Tasawalehs 390. 16. Nahabatwalehs 89; 17. Daphalis 58; 18. Nariyal 15; 19. Bazigurs 11; 20. Chambas 36; 21. Washermen 1862; 22. Shawl washermen 5; 23. Soap makers 1; 24. Tallow candle makers 3; 25. Torch makers 4; 26. Taylors 250; 27. Tent makers 1; 28. Barbers 2284; 29. Helas 4; 30. Nats 11; 31. Missiwalehs 11; 32. Red lead makers 5; 33. Laheri or makers of lac ornaments 249; 34. Churisaz or bracelet makers 28; 35. Sakhari or shell cutters 22; 36. Malis or garland makers 348; 37. Inn makers 3; 38. Mat makers 382; 39. Thatchers 600; 40. Dom or Bangsphor or basket makers 796; 41. Paper makers 96; 42. Book binders 1; 43. Shoe makers or Chamar 1669; 44. Dabgar or leathern bag makers 4; 45. Atushbas or preparers of fire works 44; 46. Preparers of Tobacco or Tamakuwalehs 286; 47. Charcoal ball makers 7; 48. Majunwalehs 1; 49. Distillers 132; 50. Pachuiwaleh or brewer 1; 51. Pasis or Tariwalehs 481; 52. Oil makers or Telis 2485; 53. Dahiya Goyalas 3740; 54. Makhaniya Goyalas 3; 55. Mayra or sweet meat makers 1; 56. Murari or sweet meat makers 1; 57. Halwais or sweet meat makers 616; 58. Puya and Phulauriwalehs 100; 59. Bharbhuna or Chabena furoah 1033; 60. Flower grinders 31; 61. Dalharis 50; 62. Nanwals 17; 63. Bukurkussab butchers 18; 64. Kussab butchers 42; 65. Bawarchis cooks 11; 66. Lohar or Barhal, who make the whole of the implements of agriculture and coarse of furniture 1340; 67. Carpenters who only make finer furniture 73; 68. Carpenters who only make the wooden parts of the implements of agriculture and coarse furniture and boats 360; 69. Jappani Nukas or painters of furniture 29; 70. Nukkash or house, boat, and palanquin painters 6; 71. Piyuri or yellow paint makers 7; 72. Sawers 25; 73. Turners or Kharadis 6; 74. Kanggaiwaleh or hair comb makers 6; 75. Potters

1177; 76. Image makers 27; 77. Brick makers 60; 78. Brick layers 218; 79. Lime burners 32; 80. Stone cutters 60; 81. Goldsmiths 725; 82. Kasera and Thatera who make vessels of copper, brass and bell metal 458; 83. Bidriwalehs 1; 84. Rangdhaluya who work in tin and pewter 49; 85. Kalaigar who tin copper and brass vessels 6; 86. Naychahbund who make flexible tubes for smoking 20; 87. Kol who smelt iron 320; 88. Lohars who only make the iron work of the implements of agriculture on coarse work for country use and forge crude iron 281; 89. Blacksmiths who only make finer work 107; 90. Koftgur or inlayers and platers 1; 91. Needle maker or Suiwalehs 2; 92. Cutlers or Sangurs and Sikulgurs 40; 93. Dhuniya or cotton cleaners 1185; 94. Spinners of cotton 168975; 95. Dyers or Rungrezs 94; 96. Weavers who work in Tasar and silk 1138; 97. Do. of cotton cloth 6212; 98. Do. of cotton carpets 3; 99. Tape makers or Newargurs 19; 100. Patwars who knit strings 88; 101. Chintz makers 9; 102. Blanket weavers 157; 103. Indigo factories 32; 104. Nuniyas who make salt-petre 174.

*L.—Value in Rupees of the Goods Exported and Imported annually from and into the District of Bhagulpoor.*

Rice Exports Rupees 84900; Imports Rupees 137525. Wheat, Export 421700; Import 84500. Barley, Export 3650; Import 1200. Maize Export 4850; Import 1700. Janera, Export 8000; Import 2200. China, Export 200. Maruya, Export 2100; Import 1600. Jaokerao, mixture of barley and pease, Export 11600; Import 7000. Chana or but, Export 89400; Import 30000. Kabali but, Export 4700. Arahara, Export 44940; Import 5200. Pease, Export 18300; Import 2600. Bora, Export 3400. Mung, Export 1600. Urid or Mashkalai, Export 46950; Import 4400. Khesari, Export 8750; Import 4500. Masur, Export 15300; Import 2200. Kulthi, Import 1100. Rape and Mustard seed, Export 123150; Import 21650. Til, Export 8000; Import 350. Linseed, Export 25500; Import 2000. Castor oil seed, Import 900; Oil, Export 2200; Import 1250. Ghlu or boiled butter, Export 122950; Import 70200. Milk, Import 10000. Coast salt or Karkach, Export 1100; Import 75900. Bengalese salt or Pangga, Export 193600; Import 509450. Sugar, Import 9860. Extract of Sugar cane, Export 17150; Import 19450. Treacle or Chhoya, Import 3750. Sukkur or coarse sugar, Import 6550. Honey, Export 350. Betlenuts, Export 1800; Import 28130. Cocoa nuts, Import 460. Tobacco, Export 9150; Import 51000. Hempbuds or Gangja, Import 3800. Indigo, Export 712100. Opium, Import 3200. Mahuya flowers, Import 1000. Turmeric, Import 600. Dry ginger, Import 200. Betle leaf, Export 60; Import 375. Safflower, Export 310. Jira seeds, Export 6000; Import 6250. Ajoyan, Export 6100; Import 200. Pasari goods, Export 18750; Import 56650. Wax, Export 700; Import 280. Catechu or Kath, Export 22000. Lac, Export 9900. Copper, Import 1400. Pewter or Justah, Import 16050. Tin or Rangga, Export 2250; Import 14525. Lead, Export 2300; Import 9500. Iron, Export 13750; Import 36100. Brass and bell-metal vessels, Export 15000; Imports 49850. Iron wares, Export 6000; Import 100. Pata or hemp of Corchorus, Import 2115. Sack cloth and bags Import 3950. Kasimiri San or hemp of Crotonaria, Export 400; Import 885. Cotton wool, Import 283000. Do. thread, Import 1450. Do. cloth, Export 6500; Import 45800. Cocoons or Tasarguti, Export 10300; Import 10000. Bhagulpoori cloth, Tasar and cotton mixed, Export 201000. Silk cocoons, Export 50000. Pure silk cloth, Export 300; Import 7300. Silk thread, Export 52000; Import 500. Maldehi, Masru and other cloths of silk and cotton mixed, Import 3500. Tasar cloth, Import 100. Chints, Import 8350. Woollen carpets and blankets, Import 1930. Gold thread, Import 100. Shawls, Import 2000. Perfumes, Import 700. Shoes, Import 600. Chank shells and ornaments, Export 508; Import 1900. Manihari goods, Export 800; Import 3320. Paper, Import 150. Wooden furniture, Export 5300. Timber of Sakuya, Sisau, &c. Import 5725. Timber for posts, beams and planks, Export 2200; Import 2100. Fire wood, Export 17150. Charcoal, Export 47450. Canoes, Import 220. Nal, Sap and Kus mats, Export 1400; Import 750. Reeds and grass, Export 600; Import 2100. Sabe rope, Export 50. Sal leaves, Export 50. Dhuna, Export 200. Fish, Export 2800; Import 1500. Swine, Export 200. Buffaloes, Export 1000. Oxen and cows, Export 5500; Import 1500. Lime, Export 700. Stone wares, Export 2800; Import 200. Kharimati, Export 2600. Singing birds, Export 500. *Total Exports Rupees 2502810; Total Imports Rupees 1688450.*

## MARKET TOWNS IN BHAGULPOOR.

*Division I. Under Thanah Kotwali.*—MARKET PLACES.—Shujagunj. Mozahed-poor. Saray. Yogsar. Munshurgunj. Khunjurpoor. Mayagunj. Kazichaok. Enayetgunj. Nathnagar. Champanagar. Lakshmigunj. Sahebgunj. Barari. Mahadinagar. Kotubgunj.

*No. II. Division under Thanah Ratnagunj.*—MARKET PLACES.—Ratnagunj. Hat Ratnagunj. Hat Badshahgunj. Bazar Amarpoor. Hat Payen. Hat Nurgunj. Katsob. Kusmaha. Dustpoor. Duriyapoor. Karjeli. Gobrachauki. Andhari. Nawada. Amdaha. Dighi.

*No. III. Division under Thanah Kodwar.*—MARKET PLACES.—Soulutgunj. Biswaskhani. Chandpoor. Durgagunj. Duriyapoor.

*No. IV. Division under Thanah Lokmanpoor.*—MARKET PLACES.—Bazar Bihi-poor or Parasurampoor. Hasurgunj. Bhamarpoor. Madhurapoor. Ladmar. Krishnagunj. Purni. Choranda. Bhawanipoor. Pangchgachhiya. Sohanigunj. Sibgunj. Viswanathgunj.

*No. V. Division under Thanah Gogri.*—Bazar Kusbah Gogri. Bahulpoor. Nandalalgunj. Raghunathgunj. Mahesgunj. Ramgunj. Simrir. Setonabad.

*No. VI. Division under Thanah Kumurgunj.*—MARKET PLACES.—Chichraun. Afzungunj. Sultangunj. Kusbah Jahangira. Saray Kumurgunj. Ghorghat. Kathgola. Mahadeva. Nauyagarhi.

*No. VII. Division under Thanah Mungger.*—MARKET PLACES.—Barabazar. Garabazar. Belanbazar. Batemangunj. Puranigunj. Muksupoor or Kalithan. Foujdari bazar. Dehuri bazar. Chaok or Wesly bazar. Topkhanah bazar. Mogul bazar. Keoramaydan. Laldarwaja. Lalupokhariya. Kuttitola. Kasema bazar. Supiabad. Hasungunj.

*No. VIII. Division under Thanah Suryagarha.*—Suryagarha. Jakarpoor. Katihara. Moulanagar. Medanichak. Nawabgunj. Rampoor. Rasulpoor.

*No. IX. Division under Thanah Mallepoor.*—MARKET PLACES.—Mallepoor. Janui. Sono. Pangchruckhi. Khorma.

*No. X. Division under Thanah Tarapoor.*—MARKET PLACES.—Bazar Gazipoor. Tarapoor. Argusgunj. Belwari. Mozuffurgunj. Kharakpoor.

*No. XI. Division under Thanah Bangka.*—MARKET PLACES.—Bazar Bangka. Hat Lakhluri. Hat Bayesi. Sahalpoor. Futehgunj. Hat Dangre. Korba. Gokula. Gopalgunj or Jamdaha. Jaypoor. Chandan. Kathan.

*No. XII. Division under Thanah Favezullahgunj.*—MARKET PLACES.—Hat Badlugunj. Gajaragunj. Pyalapoor. Dirghi. Kumalpoor. Krishnadaspoor. Kusbah Kahalgang. Narayanvati.

*No. XIII. Division under Thanah Paingti.*—MARKET PLACES.—Hat Sahebgunj. Gangaprasad. Bazar Paingti.

*No. XIV. Division under Thanah Rajmahal.*—MARKET PLACES.—Bazar Ney-amutullah Kan. Kachcha Saray. Katra. Matsyabhuwan. Sirsigali. Kasem-gunj. Shurifah bazar. Gudagunj. Imamgunj. Pirgunj. Ratnagunj. Salud bazar. Pandariba. Sulimpoor. Hat Kathgola. Atapoor. Katigunj. Sakrigali. Chapujan. Araitikar. Kochpara. Mohubbutpoor. Masaha.

*No. XV. Division under Thanah Phutkipoor.*—MARKET PLACES.—Hat Udha-wanala. Surfurazgunj or Phutkipur. Bazar Babulbana. Begumgunj. Serasan.

*No. XVI. Division under Thanah Furrokhabad.*—MARKET PLACES.—Saray Furrokhabad. Nayansuk. Jhamar. Kharirdangra or Beoya.

*No. XVII. Division under Thanah Pratapgunj.*—MARKET PLACES.—Hat Shum-shergunj. Anupnagar. Mahadevnagar or Naya Hat. Pratapgunj. Chaukarhat. Mahangunj. Deonapoor.

*No. XVIII. Division under Thanah Aurunggabad.*—Hat Manggalpoor or Herbertgunj. Hat Kaligunj. Bhawanivati. Dewanahpoor or Ekhtiyargunj. Jafurgunj.

*No. XIX. Division under Thanah Kalikapoor.*—MARKET PLACES.—Hat Kalika-poor. Dubrajpoor. Nurai. Virkati.

*No. XX. Division under Thanah Lakardewani.*—MARKET PLACES.—Hat Nuni. Samankheta. Hasdiha. Dhanbe. Heduya. Kayerbangk. Dumariya. Joka. Madhuban. Gidhini. Amarpani. Jaratal. Kerokhatesari. Satpahari. Dod-iane. Keduya. Gargariya. Kangliya. Kesari. Nawadi. Jarka. Rampoor. Marikadi. Rayikadari. Badhiyadi. Parpa. Birajpoor. Jarmuri. Bangskimanda. Lakardewani. Khayerbani. Jiraliya. Baluyadabar. Harayamerdi. Supchala. Chandna. Rora. Gormala. Kumrabad. Kadai. Futehpoor. Asansol. Dumka. Dharampoor. Dudhuya.



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